

UNITED STATES NUCLEAR DETERRENCE POSTURE FOR THE 21ST CENTURY

by
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Abstract

This capstone memorandum explores the potential for significant nuclear threats across the globe to emerge in the 21st century. The current Trump Administration is currently faced with a number of volatile nuclear environments particularly in North Korea as well as Russia and their recent geo-political encroachments in Eastern Europe. Looking at nearly 50 years of DoD nuclear policy planning, this Capstone investigates current opportunities for further nuclear modernization and investments to current legs of the nuclear triad that have the potential to deter future nuclear escalation.

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TO Undersecretary of Defense for Policy Planning
FROM Peter Hawkins
SUBJECT Incoming Presidential Administration Nuclear Posture
Date 25 April 2017

Action Forcing Event

In response to the growing nuclear threat from North Korea, “The Pentagon has deployed high-tech radar to keep watch for a potential North Korean long-range missile launch in the coming months, according to a US defense official.” The floating radar, known as the SB-X, is based out of Hawaii and is a vital component of the Department of Defense missile defense efforts. This latest deployment of US radar technology is in response to North Korea now in the process of being able to conduct what would be the country’s first effort to launch a flight tested ICBM.¹ At the same time, the President-elect recently commented that the “United States must strengthen and expand its nuclear capability until as the world comes to its senses regarding nukes.”²

Statement of the Problem-Weaknesses in US Deterrence

The central problem this analysis seeks to address is that nuclear modernization did not accompany new arms reductions as first indicated by the Obama administration. Also, regime changes, shifts in leaderships as well as an assortment of global events have contributed towards

¹ Choe Hun, "Kim Jong-un Says North Korea Is Preparing to Test Long-Range Missile," The New York Times, January 1, 2017, , https://www.nytimes.com/2017/01/01/world/asia/north-korea-intercontinental-ballistic-missile-test-kim-jong-un.html?_r=1

² Max Fisher, "Trump's Nuclear Weapons Tweet, Translate and Explained," The New York Times, December 22, 2016,, <https://www.nytimes.com/interactive/2016/12/22/world/americas/trump-nuclear-tweet.html>.

Department of Defense officials to take note of how the international security environment has undergone significant shifts. Historical evidence indicates that the conclusion of the Cold War signaled a uni-polar moment often described by political scientists to indicate a period marking the United States as the dominant superpower, global political/economic/military force. Emerging nuclear development activities, globalization and subsequent advances in military technology have led many policymakers as well as military strategists to assume that there has been a shift in power again. September 11, 2001, proved to be an event that forever altered the international geopolitical landscape.

In 2013, Russian encroachments into Crimea had sparked a newly invigorated power tussle among the two Eastern states. Evan Montgomery a Senior Fellow at the Center for Strategic and Budgetary Assessments has noted that “changes in the size and shape of the arsenal have important implications for how Washington extends nuclear deterrence to other nations-and those changes could have significant consequences if dormant rivalries reemerge, new rivalries become more intense, and the conventional military advantages the United States has counted on begin to erode.”³

Current trends are indicating that the United States faces a significant disparity in American arms reduction compared to Russian arms reduction. Mark Schneider, a former senior official in the Defense Department and current senior analyst at the National Institute of Public Policy highlights the inconvenient truth that Russia has since 2010, “increased its deployed warheads. Russia has reached 1,735 deployed warheads, an increase of 198 warheads since New

³ Montgomery , Evan . Extended Deterrence in the Second Nuclear Age. Washington, DC: Center for Strategic and Budgetary Assessments, 2016.

START'S EIF when Russia had 1,537 deployed warheads.”⁴ In an ever increasing volatile international environment, deterrence is an important advantage that has the potential to erode under current New START measures. The Evidence is showing that New START is pointing towards trends of primarily United States nuclear reduction with minimal Russian cooperation in reducing their nuclear arsenal.

By recent delaying of modernization yet still moving forward with subsequent arms control reductions the US as well as our strategic allies are vulnerable from a national security perspective. For example, the Cuban Missile Crisis is a case where American qualitative/quantitative missile superiority assisted in combating the Soviet threat of a nuclear doomsday. Nonetheless, once the Soviets reached a level of nuclear parity with the United States, they placed warheads back in Cuba a decade after the Cuban Missile Crisis. Foreign Affairs reported in 1971 that “Since September of 1970 a renewal of the 1962 Cuban missile crisis has been in prospect. Highly placed White House sources indicated that the Soviet Union had begun work on a submarine on the Southern Coast of Cuba at Cienfuegos, a base which could repair and refuel missile firing submarines of the Soviet Navy.”⁵ Historical evidence suggests that when the U.S. and Russia experience both approximate qualitative and quantitative parity, there lies increased vulnerability from the U.S. During 2001, when the Bush Administration pledged for increased modernization of missile defense systems, this period was eventually followed by both unilateral offensive reductions in arms from both Russia and the

⁴ Schneider, Mark . "Russia's Growing Strategic Nuclear Forces and New START Treaty Compliance." National Institute for Public Policy , no. 407 (June 21, 2016). <http://www.nipp.org/wp-content/uploads/2016/06/IS-407.pdf>.

⁵ Quester, George . "Missiles in Cuba, 1970." Foreign Affairs . April 1971. Accessed April 10, 2017. <https://www.foreignaffairs.com/articles/cuba/1971-04-01/missiles-cuba-1970>.

U.S.⁶ Additionally, the Bush Administrations remarkably aggressive decision to withdraw from the ABM treaty was met with future rhetoric from Putin in his desire for further offensive reductions.⁷

Ultimately, one of the principal goals of New START was bilateral, arms reductions between the United States and Russia. However, treaty loopholes effectively negate any potential benefit of Russian nuclear downsizing. As Michela Dodge of the Heritage Foundation points out, the United States “managed to negotiate a treaty in which the United States bears the majority of mandated reductions while Russia is allowed to add deployed nuclear weapons and delivery vehicles to its inventory (and has been doing so). Due to counting rules, nuclear reductions border on insignificant and allow Russia to deploy more nuclear warheads than it deployed under the 2002 Moscow Treaty that preceded New START.”⁸ Furthermore, current the structure of the New START treaty apparatus does not support the claim that Russia is making a real “Net Changes in warhead counts.

During 2010, US Senate Foreign Relations committee discussion surrounding ratification of New START highlights the reality that net Russia is not making significant inroads in nuclear reduction based on vague loopholes in the treaty structure. The minority report indicates that “New START supposedly establishes a ceiling of 1,550 warheads on strategic nuclear delivery vehicles. Yet, due to the porous limitations and permissive bomber and other counting rules, that would allow unlimited air-launched cruise missiles and could include other uncounted options

⁶Huntley, Wade, and Mitsuru Kurosawa. Nuclear Disarmament in the Twenty-first Century. Hiroshima : The Hiroshima Peace Institute and Editors , 2004.

⁷ Ibid

⁸ <http://www.heritage.org/arms-control/report/new-strategic-arms-reduction-treaty-time-stop-the-damage-us-national-security>

like sea-launched cruise missiles, there is a distinct possibility that by the end of the ten-year life of this treaty Russia will easily have well over 2,000 real—as opposed to accountable—deployed strategic nuclear warheads and thousands of tactical nuclear warheads.”⁹ Also, a major problem the next administration must factor in is that “decreases in Russian” warheads and the notion of nuclear parity with the United States following New START are corrupted the by the modernization desires of the Russian Duma. If the United States goal of strategic stability is deemed as the basis for New START, Russian motivations to modernize pre-existing nuclear forces corrupt the impact of a US/Russia “path to zero”. Nuclear missile trains are a prime nuclear capability example of this growing national security concern American policymakers will soon face. “Highly valued for their discreet appearance and survivability in the event of an attack, these systems were limited under START, and the then-existing Russian system was banned in 1993 under START II. These systems, however, are not covered by New START, which supersedes START II.”¹⁰ The modernization of what are mostly previously used nuclear missile trains, indicate that no matter what reductions ultimately take place through New START, modernization loopholes are destructive to maintaining the ultimate American goal of strategic stability. As Russia continues to be politically aggravated by NATO allies engaging in defense plans to protect the European region, Russian modernization trumps any efforts to create a culture of nuclear parity/reduction through New START. During late 2016, President Vladimir Putin’s spokesman Dmitry Peskov made direct reference to these trends, noting that “Russia is doing what is necessary to protect itself amid NATO's expansion toward its borders,” Mr. Peskov

⁹ Treaty with Russia on Measures for Further Reduction and Limitation of Strategic Offensive Arms (The New START Treaty),” Senate Foreign Relations Committee, October 2010, pp. 110-111, available at: <<http://foreign.senate.gov/treaties/details/?id=1668ace8-5056-a032-526a-29c8fc32e1dc>>

¹⁰ Dodge, Michela. "New Strategic Arms Reduction Treaty: Time to Stop the Damage to U.S. National Security." The Heritage Foundation. June 20, 2016. <http://www.heritage.org/arms-control/report/new-strategic-arms-reduction-treaty-time-stop-the-damage-us-national-security>

said.”¹¹ Effectively, New START created a dynamic in which Russia can compromise US missile defense systems by taking advantage of treaty language that does not constrain varying degrees of modernization.¹²

A cornerstone of the Obama administration push for New START is centered on the idea that nuclear forces reductions are met with increased modernization funding. Modernization served as a prime motivator for Republican and Democratic bi-partisan support for New START. Nonetheless, a July 2016 Washington Post report cited evidence that in the waning months of the Obama administration, efforts to push through a ten-year budget proposal for modernization were in serious jeopardy of being pushed through. As reported at the time “The administration also wants to cut back long-term plans for modernizing the nation’s nuclear arsenal, which the Congressional Budget Office reports will cost about \$350 billion over the next decade. Obama may establish a blue-ribbon panel of experts to examine the long-term budget for these efforts and find ways to scale it back.”¹³

The impact of failure to implement nuclear modernization post-New START could be grave to US national security interests. If continued modernization does not take place while being met with further reductions in US arms, a problem could arise in solidifying the efficiency and survivability of current remaining US nuclear forces. Survivability is a hair-raising concern

¹¹ Osborne, Samuel . "Russia Successfully Tests Missiles That Fire from Nuclear Trains ." Independent . November 23, 2016. <http://www.independent.co.uk/news/world/europe/russia-putin-nuclear-train-missiles-tests-success-a7433861.html>.

¹² Dodge, Michela. "New Strategic Arms Reduction Treaty: Time to Stop the Damage to U.S. National Security." The Heritage Foundation. June 20, 2016. <http://www.heritage.org/arms-control/report/new-strategic-arms-reduction-treaty-time-stop-the-damage-us-national-security>

¹³ Rogin , Josh . "Obama Plans Major Nuclear Policy Changes in His Final Months ." The Washington Post , July 10, 2016. https://www.washingtonpost.com/opinions/global-opinions/obama-plans-major-nuclear-policy-changes-in-his-final-months/2016/07/10/fef3d5ca-4521-11e6-88d0-6adee48be8bc_story.html?utm_term=.d9de69a971b6.

when reports are indicating that the nuclear arsenal as of 2014 cost 8.3 billion dollars to maintain, more than 30 % on an aggregate basis since the mid-2000s.¹⁴

A May 2016, State Department New START fact sheets highlight arms reductions trends among Russian and American ballistic missiles, warheads, and launchers. For example, on warheads deployed on ICBM's, the United States has reduced its warhead count from 2011 New START introduction of 1,800 warheads to a May 2016 amount of 1,481 warheads. By contrast, Russia has increased its warhead count from 1,537 in 2011 to a May 2016 figure of 1,735.¹⁵ As a result, this analysis seeks to observe policy solutions for a nuclear deterrence crisis that could quickly emerge in the current Donald Trump administration. Strategic Nuclear Deterrence in its broadest sense is defined as the ability to "persuade a potential adversary that the risks and costs of his proposed action far outweigh any gains that he might hope to achieve."¹⁶ The current US posture of deterrence is predicated upon reflecting a sense of overwhelming nuclear force. "It is the idea that "nuclear war will be prevented by the threat that any attacker would suffer unacceptable retaliation. Realizing this, the would-be attacker would therefore be deterred."¹⁷

Further evidence has indicated that the latest round of nuclear negotiations with Russia have placed the United States at a disadvantage in achieving what the Obama administration aimed for in a path to zero nuclear arms for both Russia and the United States. For example, Schneider highlights evidence indicating that "1) the absence of any reductions in deployed

¹⁴ Vartabedian , Ralph, and W.J. Hennigan. "Aging Nuclear Arsenal grows even more costly." Los Angeles Times, November 8, 2014.

¹⁵ Dodge, Michaela . "New Strategic Arms Reduction Treaty: Time to Stop the Damage to U.S. National Security." The Heritage Foundation. June 20, 2016. <http://www.heritage.org/research/reports/2016/06/new-strategic-arms-reduction-treaty-time-to-stop-the-damage-to-us-national-security>.

¹⁶ Pifer , Steven , Richard Bush, Vanda Brown, Martin Indyk, Michael O'Hanlon, and Kenneth Pollack. "US Nuclear and Extended Deterrence ." The Brookings Institution . May 2010. https://www.brookings.edu/wp-content/uploads/2016/06/06_nuclear_deterrence.pdf.

¹⁷ David Barash , Peace & Conflict Studies , 2nd ed. (Washington , DC: Sage Publications).

warheads or delivery vehicles on the part of Russia; 2) major loopholes, because of counting rules as well as the lack of limitations and prohibitions on strategic forces resulting from the omission of dozens of important provisions in the START Treaty”¹⁸ have created an environment free of measurable accountability for Russian arms reduction. The notion of nuclear deterrence focuses on a risk analysis that every administration must address. The accurate analysis is not exclusive to if further imbalances in arms reductions will prevent nuclear war. Instead, the growing concern is what is the probability that ineffective New START reductions measures run the risk of eroding active mutual nuclear deterrence.

The scope of the current issues facing American defense policy makers on this issue is widespread to international allies and Eastern European state actors. Current New START arms reduction measures are failing in regards to the United States ability to deliver effective nuclear deterrence to its allies in Eastern European regions. Tactical nuclear weapons are at the center for this national security for the new administration. Baker Spring of The Heritage Foundation has noted that “New START does not impose any limits whatsoever on tactical nuclear weapons. As such, the Russian advantage poses a significant challenge for the U.S. in maintaining a credible extended deterrence policy for the benefit of its allies.”¹⁹ Also, Vladimir Putin’s decision to exercise military force into Crimea calls into question the effectiveness of American’s deterrence umbrella spreading to allies. In his book, *The Case for U.S. nuclear weapons in the 21st century*, Brad Roberts cites an uncertain geo-political climate in rising confidence that Russia has in penetrating American defense systems. Roberts notes that “some influential Russian experts have

¹⁸ Schneider, Mark. “New START: The Anatomy of a Failed Negotiation.” National Institute for Public Policy. July, 2016. <http://www.nipp.org/wp-content/uploads/2014/12/New-start.pdf>

¹⁹ Spring, Baker. “Twelve Flaws of New START That Will Be Difficult to Fix.” The Heritage Foundation. September 16, 2010. <http://www.heritage.org/research/reports/2010/09/twelve-flaws-of-new-start-that-will-be-difficult-to-fix>.

concluded that the United States has not, and in the foreseeable future, will not have a strategic missile defense system capable of fending off a retaliatory counter-strike...by Russian strategic nuclear forces.”²⁰

The current administration must address the statistical facts that indicate current arms reductions measures under New START provide minimal accountability to Russia and allow the United States to lose nuclear advantage leverage that holds obvious ramifications for US and allied national security. “On June 1, 2011, the State Department announced that Russia was below both the limit of 1,550 deployed warheads and 700 deployed delivery vehicles: the Russians had declared 1,537 and 521, respectively, in the first of the New START data exchanges. Thus, Russia will make no reductions in deployed warheads or delivery vehicles due to treaty limitations. By contrast, the United States will have to reduce its accountable warheads from 1,800 to 1,550 and its deployed strategic delivery vehicles from 882 to 700.”²¹ Statistics indicate that United States deterrence is subsequently undermined due to treaty regulation that indicates a net loss for American nuclear advantage. Because Russia already fell below nuclear arms limits standards once New START was put in motion, the United States was forced to “to reduce unilaterally our forces, such as missiles, bombers, and warheads, in order to meet treaty limits. On the other hand, the Russians will actually be allowed to increase their deployed forces because they currently fall below the treaty’s limits.”²²

American leverage in future arms control negotiations is in serious jeopardy as a result of New START statistics indicating that the United States depleted over 25 % of its legacy force in

²⁰ Roberts, Brad . The Case for US Nuclear Weapons . Palo Alto , CA: Stanford University Press, 2015.

²¹ Schneider, Mark. “New START: The Anatomy of a Failed Negotiation.” National Institute for Public Policy. July, 2016. <http://www.nipp.org/wp-content/uploads/2014/12/New-start.pdf>

²² Ibid

return for no net losses for Russian strategic legacy nuclear forces.²³ In fact, Russian foreign policy analysts declared that New START was a major success for Russia. The overarching issue at stake is that current New START measures contain measures that have the potential to increase Russian nuclear strike capability and further jeopardize the United States as the ultimate hegemonic nuclear power. A combination of Russian motivation to modernize nuclear forces while the United States appears to engage in unilateral arms reductions is counterproductive to establishing a sound deterrence posture. Future disagreements on foreign policy negotiations have the potential to go lose ground for American interests with new reports emerging that Russia is in the midst of developing a new “silo based liquid fueled missile with a heavy load. The missile would be capable of overcoming the future US missile defense.”²⁴ Finally, it is worth noting; the Obama administration certainly was intent on cutting nuclear forces. Nonetheless, New START ultimately represents a flawed approach that results in “U.S. missile defense systems are under intensified attack at a time when the United States and its allies face a growing missile threat from rogue states.”²⁵

The possession of nuclear arms is critical in the process of which weapons of mass destruction can be used to create further diplomat dialogue versus war. The future international security landscape may call for a hybrid of sorts where the United States and our allies use a combination of tough rhetoric, sanctions as well as nuclear weapons all serving as instruments of greater peace. Nuclear weapons, as I see it, represent a form of strength that the United States can use to foster higher levels of peace in the futures. The Obama administration implemented rhetoric noting the day where there is complete disarmament of nuclear weapons worldwide. The

²³ Ibid

²⁴ Lilly , Bilyana . Russia Foreign Policy Toward Missile Defense . Lexington Books , 2014.

²⁵ Schneider, Mark. “New START: The Anatomy of a Failed Negotiation.” National Institute for Public Policy. July, 2016. <http://www.nipp.org/wp-content/uploads/2014/12/New-start.pdf>

geopolitical as well as transnational terror presence arguably makes this endeavor unrealistic and detrimental to the long-term safety of the United States and our allies.

Finally, a major theme behind this analysis is the notion that increased Russian advantages in the size of its nuclear arsenal pose a significant risk to the United States in its approach in defending European allies from further Russian encroachments. Russian UN ambassador has noted that Russia-United States, diplomatic relations are at their worst since 1973.²⁶ Furthermore, “Nuclear threats of many types will be a major part of Russian pressure on the U.S. to accept Russian domination of Eastern Europe and to withdraw missile defense from Europe.”²⁷ The intention of New START was for a cooperative, marginalized reduction of Russian nuclear forces. Until Putin acknowledges the goal of maintaining a consistent approach in nuclear warhead reduction the United States cannot afford to be the sole actor in nuclear force reduction. Evidence is showing that New START is pointing towards trends of primarily United States nuclear reduction. The intention of the treaty surely is not a unilateral, US reduction endeavor.

A hallmark of the second nuclear age will be how US policy makers are able to deal with the complex issues surrounding extended nuclear deterrence. As noted above, the previous Obama administration’s nuclear policy was marked by a vision of a nuclear free world. To what extent US policymakers should seek to extend, invest and prioritize the development of the US nuclear umbrella will be of major importance to the next administration. Evan Montgomery notes in his analysis how “changes in the size and shape of the arsenal have important

²⁶ Somini Sengupta, "A Senior Russian Envoy's Take on Relations with the United States: 'Pretty Bad,'" The New York Times, October 17, 2016, https://www.nytimes.com/2016/10/18/world/vitaly-churkin-russia-united-states.html?_r=1.

²⁷ Schneider, Mark. "The Russian Nuclear Weapons Buildup and the Future of the New START Treaty." Real Clear Defense. November 02, 2016. http://www.realcleardefense.com/articles/2016/11/02/the_russian_nuclear_weapons_buildup_110294.html.

implications for how Washington extends nuclear deterrence to other nations-and those changes could have significant consequences if dormant rivalries reemerge, new rivalries become more intense, and the conventional military advantages the United States has counted on begin to erode.”²⁸

History

Dating back to four decades, the United States and Russia have engaged in a variety of policy agreements and treaty measures to attempt to reduce each nation’s nuclear arsenal size, modernization and subsequent expansion. The genesis of Russian/US strategic nuclear arms agreements began in 1969 under SALT 1.²⁹ The conclusion of World War II and the destruction levied on Hiroshima as a result of the Atomic Bomb sparked a newly invigorated mindset towards which hegemonic force could achieve military prowess. Joseph Stalin ultimately aspired to a geo-political strategic balance following WWII. In reality, the use of the Atomic Bomb was the first catalyst in a series of souring Russia-US competition over nuclear arms.³⁰ Following WWII, a clear shift in strategy began in which Russia was heavily focused on increases to nuclear stockpiles (raw warhead counts), while the United States under the direction of Robert McNamara was dedicated to developing advancements in nuclear modernization, including missile defense penetrating capable missiles.³¹

²⁸ Montgomery , Evan . Extended Deterrence in the Second Nuclear Age. Washington, DC: Center for Strategic and Budgetary Assessments, 2016.

²⁹ Kimball, Daryl. “U.S.-Russian Nuclear Arms Control Agreements at a Glance.” Arms Control Association. Accessed April 1, 2014. <https://www.armscontrol.org/factsheets/USRussianNuclearAgreementsMarch2010>.

³⁰ Stephen J. Zaloga, *The Kremlin's Nuclear Sword: The Rise and Fall of Russia's Nuclear Forces* (Washington D.C.: Smithsonian Institution Press, 2002), 7.

³¹ Lori Esposito Murray, “SALT I and Congress: Building a Consensus for Nuclear Arms Control, Vol. 1” (Ph.D Diss., Johns Hopkins University: 1989), 65

Dating back to the Cuban Missile Crisis, historical evidence suggests that while American numerical superiority has been an advantage for U.S. defense at large, Russian goals of modernization to counter quantitative advantages was also an element of the nuclear strategic balance of power. In his book, *Postwar America: An Encyclopedia of Social, Political Cultural and Economics History*, James Ciment elaborates on this phenomenon. He notes that after the Cuban Missile Crisis, “Soviet defense planners worked to achieve parity in nuclear weaponry, while the United States sought to maintain its qualitative and quantitative advantages within McNamara’s cost-efficiency guidelines.”³² Furthermore, the late 1960’s through the period of the origination of MAD (Mutual Assured Destruction), the US was aware that numerical advantages did not always represent an overwhelming deterrent. Signs of Russian modernization being capable of trumping US force size were a reality US defense policy makers were increasingly aware of. Ciment suggests that “although the United States enjoyed a two to one advantage in total strategic warheads and bombs in 1970 (about 4000 to 2000), the Soviets then had enough SS-9s for American planners to realize that fighting a limited nuclear war was impossible.”³³

The onset of the Nixon administration, proved to be a landmark moment in real significant efforts being made towards, Russian, United States arms control. The previous Johnson administration pushed for arms reductions up until the transition of the Nixon administration. Interestingly enough, Henry Kissinger in his memoirs notes, he believes that Nixon was ultimately purposefully complement in rolling out already prepared arms reductions postures from the Johnson administration for a variety of political factors, including Nixon

³² Ciment, James . *Postwar America: An Encyclopedia of Social, Political, Cultural, and Economic History*. Routledge, 2015.

³³ Ibid

himself being able to take credit for the assembling of his own unique, US nuclear arms reduction posture.³⁴

The Salt I treaty began in 1969 and was eventually ratified in 1972. Under the agreement, Russia and the United States each pledged not to “not to construct new ICBM silos, not to increase the size of existing ICBM silos “significantly,” and capped the number of SLBM launch tubes and SLBM-carrying submarines. The agreement ignored strategic bombers and did not address warhead numbers, leaving both sides free to enlarge their forces by deploying multiple warheads (MIRVs) onto their ICBMs and SLBMs and increasing their bomber-based forces. The agreement limited the United States to 1,054 ICBM silos and 656 SLBM launch tubes.”³⁵

An interesting dynamic behind the SALT 1 negotiations revolves around the Nixon administration not having a clear bargaining position. As noted by private conversations between Nixon and Kissinger throughout a period of time from 1969-1972, public opinion and political leverage within Nixon’s own party, shapes his hesitancy towards defining clear American foreign policy positions with respect to arms control. For example, archived U.S. department of State conversations between Kissinger and Nixon draw insight into this recurring theme leading up to Salt 1. Nixon at one point stated to Kissinger his intention for the “the Congress ratify the treaty and eventually it will be passed -- or on any problem you face, arms limitation or anything that we may talk about with the Soviets, the alliance is, as we say in the United States, the Blue Chip, the heart of the defense of Europe and the free world. As far as the Soviets are concerned, all their actions are designed to break up that alliance. We shall not fall into that trap. We will talk but we won't get trapped. Let us not weaken the alliance. We have to think about what they

³⁴ Kissinger, White House Years, e.g. 29.

³⁵ Kimball, Daryl. “U.S.-Russian Nuclear Arms Control Agreements at a Glance.” Arms Control Association. Accessed April 1, 2014. <https://www.armscontrol.org/factsheets/USRussiaNuclearAgreementsMarch2010>.

want and then look at our alliance and particularly at Germany. We know their aim and are keenly aware that we "play the same game".³⁶

SALT 1 proved to be a treaty negotiation plagued with institutional red tape. Literature reveals Nixon and Kissinger were keenly aware of the complexities surrounding the interrelationship between the bureaucratic, agency level (CIA, Pentagon) players in arms control, The White House and the soviet government. As noted by Kempfer of Bowling Green State University, Nixon was concerned with bureaucratic actors rushing to arms control to fulfill their agency focus of rapid arms control. However, Nixon, by not providing explicit goals going into Salt 1 talks, was concerned with public and institutional perception of him not being fully open to specific arms control reduction amounts.³⁷

Salt 1 provides a basis for understanding the early stages of an issue for deterrence for arsenal size superiority for the Russians. For starters, the three year delay from 1969-1972, allowed the Russians to vigorously build up nuclear arsenals.³⁸ While SALT 1 was successful in allowing the Soviets and Americans to be motivated towards taking steps to nuclear parity, American reluctance to develop policy positions effectively eliminating American advantages in MIRV's (intercontinental nuclear missile carrying several independent warheads). A ban on MIRV's as Raymond Garthoff points out had the potential to hinder future ambitions of offensive arms race.³⁹

³⁶ "Foreign Relations, 1969-1976, Volume E-2, Documents on Arms Control, 1969-1972." U.S. Department of State Archive. <https://2001-2009.state.gov/r/pa/ho/frus/nixon/e2/83218.htm>.

³⁷Kempfer, Brian E., "History of Negotiations and Politics of Strategic Arms Limitation Talks (SALT)" (2013). Honors Projects. <http://scholarworks.bgsu.edu/cgi/viewcontent.cgi?article=1041&context=honorsprojects>

³⁸ Ibid

³⁹ Garthoff, *Détente and Confrontation*, p.22

Following SALT 1, literature suggests that the Carter administration begins to accelerate the fear of implications of reducing effects of the nuclear triad or the SIOP (Single Integrated Operational Plan). Literature suggests “a key issue was the credibility of deterrence, with advisers from Kissinger to Brzezinski worried that even the "smaller" SIOP options were so huge that they reduced the credibility of deterrence.”⁴⁰ The Carter administration was focused on deviating away from arms reductions talks that were solely centralized in surviving a nuclear war. By contrast, the Carter Administration “sought to disabuse the Kremlin of that notion by creating "pre-planned" strike options that directly targeted the Soviet leadership.”⁴¹

Presidential Directive 59 Memorandum, as history has shown, found itself to be one of the most controversial elements of the Carter administration in relation to US concerns at the time of eroding of deterrence in relation to Russian arsenal size. Among other things, the focus of the Carter administration was envisioning scenarios by which the US could jeopardize its potential to win nuclear war in the event of a scenario where there are clear Soviet advantages in first strike scenarios.⁴² Carter veers away from MAD (Mutually Assured Destruction) in this policy oriented document. Furthermore, Carter reiterates that “to continue to deter in an era of strategic nuclear equivalence, it is necessary to have nuclear forces such that in considering nuclear aggression against our interests any adversary would recognize that no plausible outcome would represent a victory on any plausible definition of victory.”⁴³

PD-59 indicated the apprehensions from the Carter administration on the extent to which the US should use overwhelming force in retaliatory situations. It is here when American policy

⁴⁰ Burr, William. "Jimmy Carter's Controversial Nuclear Targeting Directive PD-59 Declassified." The National Security Archive. September 12, 2012. <http://nsarchive.gwu.edu/nukevault/ebb390/>.

⁴¹ Ibid

⁴² Ibid

⁴³ Odom, William. "Memorandum: The White House." The National Security Archive. <http://nsarchive.gwu.edu/nukevault/ebb390/docs/7-25-80%20PD%2059.pdf>.

regarding retaliation begins to take full shape as Carter instructs in his memo that changes needed to be made in how the US responds to warnings of nuclear attacks. As indicated in the memo, the authors of PD-59 direct that “while it will remain our (US) policy not to rely on launching nuclear weapons on warning that an attack has begun, appropriate pre-planning, especially for ICBM’s that are vulnerable to a preemptive attack, will be undertaken to provide the president the option of so launching.”⁴⁴ PD-59 was the first of nuclear policies formed by the US, in relation to preserving deterrence that gave the US flexibility to use nuclear options beyond just the execution of one massive strike.

One key element of the memo, that ultimately had a lasting impact in how the US shaped future forces and strike capabilities relates to how the US should respond in the event of failed deterrence. Carter directed that “If deterrence failed, the United States "must be capable of fighting successfully so that the adversary would not achieve his war aims and would suffer costs that are unacceptable.”⁴⁵ Central to PD-59, is how Carter’s tactical nuclear posture laid out in 1980 still serves the basis for policy formulation today. Nonetheless, this posture spawned from the basis that the US had qualitative/quantitative nuclear advantages against the Soviets. Carter and his national security council were concerned with Soviet ability to survive US nuclear attack. As shown in the document, “A key element of PD-59 was to use high-tech intelligence to find nuclear weapons targets in battlefield situations, strike the targets, and then assess the damage — a "look-shoot-look" capability.”⁴⁶

⁴⁴ Ibid

⁴⁵ Ibid

⁴⁶ Burr, William. "How to Fight a Nuclear War Revealed: Jimmy Carter's strategy for Armageddon. (We're still using it.) ." Foreign Policy, September 14, 2012.

1981-2003 marks a period in which transition into Republican leadership had a significant impact in the shaping of US nuclear forces and policy with respect to the Soviet Union. Ronald Reagan rose to prominence prior to his presidency instilling rhetoric consistent with views the US was lagging behind the Soviets in regards to modernization, warhead count and technological innovation. At one point during his presidential candidacy, Reagan highlighted the flaws of SALT II, strategic arms limitations treaty.⁴⁷

Also, “as president, Reagan accelerated strategic nuclear modernization plans and launched modern efforts to build a national missile defense system through his Strategic Defense Initiative of 1983 (SDI), raising tensions with the Soviet Union and prompting widespread public concern about the possibility of war between world’s two major nuclear superpowers.”⁴⁸ SDI proved to be a watershed moment in souring of US-Soviet relations as the nuclear missile defense policy, the first of its kind highlights the focus of the Reagan administration on the fear of US incapability to retaliate in the event of a Soviet first strike. The program was set to consist “of several plans to counter nuclear missiles, including laser beams, which would be mounted on satellites in space to shoot down nuclear missiles. A mirror would be used to reflect the beam towards the missile.”⁴⁹ The Reagan administrations in its early stages were largely concerned with the concept of an extended nuclear war. In 1981 “he unveiled his plan for a major, strategic modernization program to add thousands of additional warheads and a variety of new delivery systems to the U.S. arsenal, while improving U.S. command and control capabilities.”⁵⁰ While the Carter administration was very much focused on intelligence gathering means to locate

⁴⁷ Kimball, Daryl. "LOOKING BACK: The Nuclear Arms Control Legacy of Ronald Reagan." Arms Control Association. July 1, 2004. https://www.armscontrol.org/act/2004_07-08/Reagan.

⁴⁸ Ibid.

⁴⁹ Krieg, Melanie. "'Star Wars': The Strategic Defense Initiative." UC Davis Prized Writing. 2008. <http://prizedwriting.ucdavis.edu/past/2008-2009/201cstar-wars201d-the-strategic-defense-initiative>.

⁵⁰ Kimball, Daryl. "LOOKING BACK: The Nuclear Arms Control Legacy of Ronald Reagan." Arms Control Association. July 1, 2004. https://www.armscontrol.org/act/2004_07-08/Reagan.

nuclear targets, the early phases of Reagan nuclear posture centered on the belief that Soviet nuclear vulnerability would in large part, come as a result a diversified nuclear force size and modernity. It was during the Carter administration that Reagan confidently noted: “If the Soviets have to compete with us, I’m sure they’ll come running to the table and say wait a minute, because they know they can’t.”⁵¹

Undoubtedly, Reagan presided over an explosion in US nuclear arsenal buildup and a committed effort to create Russian missile defense programs. Nonetheless, the fall of the Soviet Union gave rise to anti-nuclear activists and launched a new wave of US approaches to what would follow Reagan’s administration and efforts to launch arms increases. Start I represents the next major wave of nuclear reduction efforts made between Russia and the United States. At a statistical glance, the treaty, originally proposed in 1982 through the Reagan administration took was ratified in 1991. “Like the SALT Treaties negotiated in the 1970s, START I aimed to stabilize nuclear deterrence and limit strategic systems (SALT = Strategic Arms Limitation Talks). All the same, the treaty not only limited the number of strategic missiles, it also reduced the number of warheads.”⁵² The geo-political climate following the fall of the Soviet Union enabled a confident President George H.W. Bush to feel confident in “dramatically shrinking the arsenal of the world’s nuclear weapons.”⁵³ Only after the fall of the Soviet Union could subsequent progress be made in nuclear arms reductions. A failing Russian economy as well as promises of continued economic assistance and a desire for Russian democratic capitalism created a setting in which President Bush could hold leverage for arms reductions talks.

⁵¹Chidester, Jeffrey. *Reagan's Legacy in a World Transformed*. Cambridge, MA: Harvard University Press, 2015.

⁵² Müller, Harald, and Annette Schaper. "US Nuclear Policy after the Cold War." *Peace Research Institute Frankfurt*. 2004. https://www.hsfk.de/fileadmin/HSFK/hsfk_downloads/prif69.pdf.

⁵³ George Bush: "Address to the Nation on Reducing United States and Soviet Nuclear Weapons," September 27, 1991. Online by Gerhard Peters and John T. Woolley, The American Presidency Project. <http://www.presidency.ucsb.edu/ws/?pid=20035>.

Ultimately START 1 was successful in establishing a sense of continuity for future arms reduction talks. However, as reported in the New York Times, “the superpowers will retain tremendous firepower, with huge numbers of weapons trained upon each other's principal cities. According to one estimate, by the Campaign for Nuclear Disarmament in Britain, the treaty will leave 40,000 nuclear warheads capable of prompt usage.”⁵⁴

Finally, the very basis for this analysis lies in trends indicating evidence of post-cold-war arms control decay. October 2016 marked a significant shift in the problem of continuing arms reduction momentum between Russia and the United States. In a decree voiced by Putin, “Russia would no longer cooperate with the United States on a 2009 agreement to dispose of weapons-grade plutonium, Moscow said it would consider reviving the agreement only if the United States scaled back its military presence near Russia’s border, lifted all sanctions against Russia, and paid Moscow compensation for the economic losses caused by the sanctions.”⁵⁵ This decree further exacerbates the issue of nuclear arsenal imbalance when compared to the United States as Putin has sought to seek aggressive stances on modernization and renewal programs intended to give Russia leverage over the United States in expanding the types of scenarios nuclear weapons could be used. Recent history has indicated that START I arms control agreements originally made in the late 1980s have the potential to collapse and put US arms control policy with Russia at a volatile state. It has been reported that after taking office for latest term in presidency “Putin announced a plan to modernize all three legs of Russia’s strategic nuclear forces.”⁵⁶

⁵⁴ Apple, R.W. "SUMMIT IN MOSCOW; BUSH AND GORBACHEV SIGN PACT TO CURTAIL NUCLEAR ARSENALS; JOIN IN CALL FOR MIDEAST TALKS." The New York Times, August 01, 1991.
<http://www.nytimes.com/1991/08/01/world/summit-moscow-bush-gorbachev-sign-pact-curtail-nuclear-arsenals-join-call-for.html?pagewanted=all>.

⁵⁵ Deluce, Dan. "Putin Throws out the Old Nuclear Rules Rattling Washington." Foreign Policy, October 16, 2016.

⁵⁶ Ibid.

The latest rounds of nuclear reductions through New START in 2010 have in part been jeopardized by prior US decisions to withdraw from the Anti-Ballistic Missile Treaty in 2002. Putin has indicated American withdrawal from ABM as a major factor in reluctance to continue arms reductions measures under New START through the Obama administration.⁵⁷ The recent Russian annexation of Crimea encapsulates the evolution of the arms control problem the US has the potential to face again with Russia. With American pledges to defend NATO allies, and Putin's startling language surrounding his willingness to use nuclear weapons in defense of Eastern European territory he has claimed as rightfully owned by Russia (Crimea) lies the potential for significant implications. US involvement to defend NATO states could endanger and eventually enable Putin to withdraw from New START completely. The US then could face a conundrum in having warhead stockpiles that fall in comparison to Russia. Subsequently, when defending NATO states as well as American home territory from a potential Russian first strike, naturally the nuclear deterrence calculus and hegemonic deterrence status the US has becomes uncertain.

Background

Nuclear weapons are an integral component to the policies shaping US national security and due to increasing geo-political tensions with Russia, will continue to play a massive role in deterring a large-scale attack on American citizens. The current Trump administration will undoubtedly arrive at an international security environment that will present opportunities for expansion of current nuclear policies such as New START, working to enhance deterrence among itself and other nuclear allies, and engage in bilateral legislative dialogue focused on

⁵⁷ Neilan , Terence . "Bush Pulls out of ABM Treaty, Putin Calls Move a Mistake ." The New York Times, December 13, 2001. <http://www.nytimes.com/2001/12/13/international/bush-pulls-out-of-abm-treaty-putin-calls-move-a-mistake.html>.

budget allocations geared towards expediting nuclear modernization programs that will put on delay by the former Obama administration.

As stated earlier, the Defense Department must acknowledge the signs that a new purpose and approach must be initiated in analyzing the previous New START nuclear treaty ratified through the Obama administration. Flawed treaty parameters essentially favored Russia in enabling Putin to increase his countries warhead amounts. Conversely, the US bared the brunt of actual arms reductions resulting from the 2010 treaty. As noted above, “Russia currently has 1,796 deployed warheads while the United States is down to 1,368. When New START entered into force, the numbers were almost reversed, with the United States having 1,800 deployed warheads and Russia 1,537.”⁵⁸ Much of deterrence is rooted in the perception of force. Current geo-political events including the Russian annexation of Crimea, atrocities occurring via the undermining efforts of Putin in Syria as well as continued stirred frictions with NATO allies have all been accompanied by a climate of nuclear modernization and a willingness to break away from New START via recent statements from Putin in the Russian press.

In terms of the analysis provided in this analysis, the issue is not exclusively focused to New START as a viable treaty for US nuclear deterrence purposes. Rather, the treaty does permit the Russian regime to increase warhead numbers, as the treaty has a verification period that is scheduled for 2018.⁵⁹ The background revolving US nuclear posture has been altered significantly by today’s current events that ultimately deviate away from the rhetoric provided in the Obama Administration 2010 Nuclear Posture Review. It was in that document where the

⁵⁸ Dodge, Michaela. "What's Wrong in Our Arms Treaty With Russia." The Daily Signal. February 15, 2017. http://dailysignal.com/2017/02/15/whats-wrong-in-our-arms-treaty-with-russia/?_ga=1.123176648.2104448685.1484274984.

⁵⁹ Ibid

Obama administration noted that the probability of military as well as nuclear conflict with Russia was at its lowest levels dating back to the Cold War.⁶⁰ Further actions by Russia since the 2010 US Nuclear Posture Review have garnered widespread fear and bi-lateral pushes for a review of US nuclear policy with respect to Russia. Putin and Russia have been steadfast in nuclear modernization efforts to replace previous Soviet Union weapons systems.⁶¹ Furthermore, “it is also in violation of a whole host of bilateral and international arms control treaties, some of which, like the Conventional Forces in Europe Treaty or the Intermediate Range Nuclear Forces (INF) Treaty, have profound implications for U.S. allies in Europe. Moscow repeatedly threatened to use nuclear weapons “pre-emptively” against U.S. allies in Europe.”⁶²

While nuclear asymmetry is a vital aspect of future nuclear deterrence policy with Russia, there are an array of other issues related to verification programs in which the Russians have the potential to develop nuclear superiority through falsified verification reports and deceptions in arsenal size when hosting inspections. Experts have referenced how “monitoring compliance with this prohibition is challenging and the potential for using denial and deception to hide the number of warheads is clearly present. Based largely on the acquisition of telemetry data from the Russians, data needed to verify Russian compliance could be denied to the U.S. government.”⁶³ Current, political shakeups along the Baltic States including the annexation of Crimea reveal a Russian attitude that is perpetuated by Putin as a moral obligation to make

⁶⁰ "Nuclear Posture Report." Department of Defense. April 2010.

https://www.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf

⁶¹ Pifer, Steven . "Nuclear modernization, arms control, and U.S.-Russia relations." The Brookings Institution. October 25, 2016. <https://www.brookings.edu/research/nuclear-modernization-arms-control-and-u-s-russia-relations/>.

⁶² Dodge, Michaela. "The Trump Administration's Nuclear Weapons Policy: First Steps." The Heritage Foundation . November 30, 2016. <http://www.heritage.org/defense/report/the-trump-administrations-nuclear-weapons-policy-first-steps>.

⁶³ Godson , Roy, and James Wirtz. Strategic Denial and Deception: The Twenty-First century Challenge. New Brunswick, N.J., 2002.

amends on the perceived losses of hegemonic influence stripped away upon the fall of the Berlin Wall.

High level security debates have the potential to be altered, shaped and influenced from public opinion/perception. A major theme coming out of the 2016 general election between Hillary Clinton and Donald Trump was the ability of the Russian government to shape the political process in the United States. Otherwise known as “information warfare”, Russia’s attempts to bully nations around the world through false propaganda’s are a cause for concern.⁶⁴ The information warfare tactics are all part of a broad plan developed by Putin intended to utilize subversive tactics that “are aimed not only at Europe but also at the United States, where they threaten to destabilize the political order.”⁶⁵ Prior to President Obama departing the White House, his administration laid out a near trillion dollar budget package aimed at setting forth a sweeping set of renewal programs aimed at modernizing the US nuclear arsenal over the span of thirty years.⁶⁶ An interesting dynamic of that modernization program proposed by Obama is the consistent levels of discourse among internal Democratic leadership as well as Republicans all pointing towards varying opinions on the need for US nuclear modernization reform.

A 2016, audio of former Secretary of State Hillary Clinton, speaking at a fundraising event in Mclean, Virginia highlights the varying views on U.S. nuclear modernization among both major political parties. Speaking to the group in a 50 minute audio, Clinton was heard remarking that the Obama proposal for a trillion dollar modernization program, including

⁶⁴ Poznansky, Michael . "The Ordinary And Unique In Russia's Electoral Information Warfare Game." War on The Rocks. September 01, 2016. <https://warontherocks.com/2016/09/the-ordinary-and-unique-in-russias-electoral-information-warfare-game/>.

⁶⁵ Smith, Julianne. "The Future of U.S.-Russia Relations." Center for New American Security . January 2017. <https://s3.amazonaws.com/files.cnas.org/documents/CNAS-Report-FutureofRussia-Final.pdf>.

⁶⁶ Blechman , Baron . "A Trillion-Dollar Nuclear Weapon Modernization is Unncessary ." The New York Times, October 26, 2016. <http://www.nytimes.com/roomfordebate/2016/10/26/a-nuclear-arsenal-upgrade/a-trillion-dollar-nuclear-weapon-modernization-is-unncessary>.

warheads, submarines and bombers as “one of the most dangerous developments imaginable.”⁶⁷

In particular, the Obama administration plans for the modernizing of an improved cruise missile have even come under fire from previous Secretary of Defense William J. Perry who served under former President Clinton from 1994-1997. In a Washington Post, op-ed, Perry cited the works of then British Defense Secretary Phillip Hammond who voiced his opposition to the modernizing program stating that “A cruise-based deterrent would carry significant risk of miscalculation and unintended escalation. At the point of firing, other states could have no way of knowing whether we had launched a conventional cruise missile or one with a nuclear warhead. Such uncertainty could risk triggering a nuclear war at a time of tension.”⁶⁸

Signs have shown across both political aisles voicing support for reformed arms control measures, beyond the current New START treaty apparatus. Obama has left modernization to his successor, Trump. Nonetheless, Democrats and Republicans have both been shown to be skeptical of modernization in determining whether or not quantitative/qualitative measures are effective in today’s foreign policy relationship with Russia. During her 2016 campaign, Mrs. Clinton pondered on modernization noting: “Do we have to do any of it? Mrs. Clinton asked. If we have to do some of it, how much will we have to do?”⁶⁹

Another sect of public opinion, specifically within the defense community of policy makers has voiced concerns that modernization efforts of the U.S. are teetering on dangerous implications giving recent developments of Russia’s sea launched cruise missile. Varying

⁶⁷ Sanger, David , and William Broad. "In Hacked Audio, Hillary Clinton Rethinks Obama's Nuclear Upgrade Plan." The New York Times, September 29, 2016

⁶⁸ Perry, William . "Mr. President, kill the new cruise missile ." The Washington Post , October 15, 2015. https://www.washingtonpost.com/opinions/mr-president-kill-the-new-cruise-missile/2015/10/15/e3e2807c-6ecd-11e5-9bfe-e59f5e244f92_story.html?utm_term=.c55f8a9e8614.

⁶⁹ Sanger, David , and William Broad. "In Hacked Audio, Hillary Clinton Rethinks Obama's Nuclear Upgrade Plan." The New York Times, September 29, 2016

perspectives in the defense community contend that American sea-based nuclear missiles are lagging behind Russia and provided an opening for Russian nuclear advantage. Clark Murdock of the Center for Strategic and International Studies notes that “the decision to retire TLAM-N (fleet defense missiles) was reportedly based in part on safety and cost concerns, but restoring some similar sea-based capability may prove desirable in the longer term.”⁷⁰ These developments provide insight into potential current weaknesses in U.S. modernization efforts and their impact on deterrence given the current Russian spy ships encroaching on waterways along the American east coast as well as the February 2017 Russian deployment of ground launched cruise missiles inside Russia, “a violation of a 1987 treaty between the US and Russia that banned ground-launched intermediate range missiles.”⁷¹

Nancy Gallagher of The Acronym Institute for Disarmament Diplomacy (1996) provides defense policy makers with insights on public opinion of post-Cold-War arms control. In her analysis, Gallagher generalizes that “Despite the deterioration of US-Russian strategic relations at the leadership level, the citizens of the two countries place a high priority on joint efforts to prevent proliferation and other forms of security cooperation.”⁷² An interesting portion of research at AIDD (Acronym Institute for Disarmament Diplomacy) has been analysis on public opinion of international arms control. With respect to the U.S. and Russia, Gallagher asserts that “One sequence of questions started by asking about the 2002 Strategic Offensive Reductions Treaty (SORT), which committed the US and Russia to reduce their number of operationally

⁷⁰Murdock, Clark , Samuel Brannen, Thomas Karako, and Angela Weaver. *Project Atom : A Competitive Strategies Approach to Defining U.S. Nuclear Strategy and Posture for 2025-2050*. Lanham , MD: Rowman and Littlefield , 20706.

⁷¹ Tomlinson , Lucas . "Russia sends spy ship near US coast, deploys banned missiles at home, officials say." *Fox News U.S.* . February 14, 2017. <http://www.foxnews.com/us/2017/02/14/russian-spy-ship-off-east-coast-us-officials-say.html>.

⁷² Gallagher, Nancy. "US And Russian Public Opinion On Arms Control And Space Security." *Acronym Institute for Disarmament Diplomacy* . May 01, 2008. <http://www.acronym.org.uk/old/dd/dd87/87ng.htm>.

deployed strategic nuclear warheads to 2,200 by the end of 2012. Eighty-eight percent of Americans and 65 percent of Russians supported this agreement, with only 11 percent and 15 percent respectively opposed.”⁷³ This finding is a key factor for current defense policy makers to take into account, as contrary to belief among conservative as well as some liberal think tank, circles, studies such as Gallagher’s reveal that citizens of both respective countries are in support of reducing arsenal sizes to the levels of other allied nation-states.⁷⁴ Evidence has shown that defense policy makers have not hesitated in deviating away from overwhelming public opinion in prior administrations, specifically on nuclear testing via the Comprehensive Test Ban Treaty of 1996. The U.S. has signed but not formally ratified the treaty. However, as highlighted by the works of AIDD, “Interestingly, when we asked Americans, "do you think the US does or does not participate in the treaty that prohibits nuclear weapon test explosions world-wide", 56 percent incorrectly thought that the United States does participate, while only 37 percent knew that the United States has so far refused to ratify the Treaty.”⁷⁵

There are a variety of principal players worthy of mention of who will play an integral role in the shaping of defense policies affecting the status of modernization and arms controls with Russia. Newly elected and 45th president Donald J. Trump arrives to the White House with an opportunity to shape a new vision for US nuclear policies. Trump arrives to the White House already deemed as a “loose cannon” on his fluctuating and often vague stances on issues regarding defense policy. However, it cannot be understated the already strong language on the current and future U.S. nuclear force posture already adopted in the first several weeks of the Trump administration. The Washington Post made reference to a recent Trump tweet “that

⁷³ Ibid

⁷⁴ Ibid

⁷⁵ Ibid

offered no details, Trump said, “The United States must greatly strengthen and expand its nuclear capability until such time as the world comes to its senses regarding nukes.”⁷⁶ Trump’s remarks come in response to additional strong rhetoric from the Kremlin, in which Putin doubled down on potentially inflammatory rhetoric whereby he acknowledges that Russia “needs to strengthen the military potential of strategic nuclear forces, especially with missile complexes that can reliably penetrate any existing and prospective missile defense systems.”⁷⁷

Trump has expressed his recent disapproval of wasteful costs associated with the F-35 fighter jet. However, he will have to employ his own judgement on many experts regard as astronomical, potentially wasteful spending of upwards of a trillion dollars on modernization of the nuclear triad. The Heritage Foundation will undoubtedly play a vital role in how the Trump Administration gathers information to formulate nuclear policy. As stated earlier, Michele Dodge of The Heritage Foundation is one of the leading voices in opposition to the Obama 2010 Nuclear Posture Report that asserted that tensions with Russia have since calmed since the conclusion of the Cold-War. Dodge notes that a failure to keep up with Russian modernization is a recipe for nuclear asymmetry with consequences in particular for NATO allies. “Dodge has called for the incoming Trump administration to spend more on its nuclear weapons program. She also said that the United States should withdraw from nonproliferation treaties that have not worked and consider resuming nuclear test explosions, the last of which was conducted in 1992.”⁷⁸

⁷⁶ Morello, Carol . "Trump says he wants to ‘greatly strengthen and expand’ U.S. nuclear capability." The Washington Post , December 22, 2016. https://www.washingtonpost.com/world/national-security/donald-trump-says-he-wants-to-greatly-strengthen-and-expand-us-nuclear-capability-a-radical-break-from-us-foreign-policy/2016/12/22/52745c22-c86e-11e6-85b5-76616a33048d_story.html?utm_term=.10a109aff847.

⁷⁷ Ibid

⁷⁸ Ibid

A key revelation coming out of the Trump administration is the “wildcard” that is recently appointed Secretary of Defense Mattis and his disagreements with Trump over key policy making officials at DoD. Specifically, Mattis was highly interested in selecting outgoing Obama Undersecretary of Defense for Policy Making Michelle Flourony. Mattis and Trump reportedly clashed over key Pentagon appointments being brought forth without his final approval.⁷⁹ Mattis was highly considering Flourony, a former Obama appointee with great admiration for.⁸⁰ While Flourony ultimately withdrew herself from consideration for a position in the Trump administration, she will undoubtedly be a strong outside player and source of guidance for Mattis regarding various matters of national security, defense and nuclear policy. Flourony has joined other strong Democratic nuclear policy thinkers in their assessment that the United States needs a “safe, secure, and responsive nuclear weapons R&D and production infrastructure to ensure a durable and credible deterrent” which will “require refurbishing the current aging weapons complex,” the Democratic party signatories concluded “there is no urgency to proceed with the administration’s RRW program or any other alternative to the long-standing SSP [Stockpile Stewardship Program] to assure the continuing safety and reliability of U.S. nuclear weapons.”⁸¹

R. James Woolsey is another significant player in nuclear policy formulation. Now an advisor to President Trump on national security, Woolsey, a Democrat formerly served as Director of Central Intelligence Agency as well as a delegate at large during U.S.-Soviet

⁷⁹ Starr, Barbara. "Mattis, Trump team clashed over Pentagon appointment." CNN. January 7, 2017. <http://www.cnn.com/2017/01/06/politics/mattis-trump-transition-clash-pentagon-pick/>.

⁸⁰ Ibid

⁸¹ The National Security Advisory Group, “Reducing Nuclear Threats and Preventing Nuclear Terrorism,” October 19, 2007.

Strategic Arms Reductions Talks (START).⁸² Woolsey has indicated Trump's willingness to slow down tough rhetoric on future arms with Russia. Rather Woolsey has asserted Trump is correct on calls to double down on modernization. In a recent interview, Woolsey is noted as saying regarding Trump's comments, "I think he's right because we have been degrading our nuclear capability over the last eight years."⁸³

Policy Proposal

Throughout the history section of this analysis, observers of U.S. nuclear policy could see how during the post-Cold War Era, much of arms reductions policy planning, as well as international treaty involvement could be done from a position of American advantage. In a December 2016, Politico Op-Ed, Matthew Kroenig asserts that "For decades, the United States was able to reduce its nuclear arsenal from Cold War highs because it did not face any plausible nuclear challengers. But great power political competition has returned, and it has brought nuclear weapons, the ultimate instrument of military force, along for the ride."⁸⁴ Following the international backlash Putin received for the Russian invasion of Crimea, the Russian leader was quoted as stating his goal was to "enhance the combat capability of strategic nuclear forces, primarily by strengthening missile complexes that will be guaranteed to penetrate existing and future missile defense systems."⁸⁵ The bedrock of future American nuclear policy proposals in relation to Russia has the potential to enhance deterrence by making advancement to current US Nuclear force structure strength. As noted by Kroenig, "The United States needs a robust nuclear

⁸² Belvedere, Matthew. "Trump advisor and ex-CIA chief aims to temper the president-elect's tough nuclear talk." CNBC. December 23, 2016. <http://www.cnbc.com/2016/12/23/trump-advisor-and-ex-cia-chief-aims-to-temper-the-president-elects-tough-nuclear-talk.html>.

⁸³ Ibid

⁸⁴ Kroenig, Matthew . "Trump said U.S. Should Expand Nuclear Weapons. He's Right." Politico. December 23, 2016. <http://www.politico.com/magazine/story/2016/12/trump-said-the-us-should-expand-nuclear-weapons-hes-right-214546>.

⁸⁵ Ibid

force, therefore, not because anyone wants to fight a nuclear war, but rather, the opposite: to deter potential adversaries from attacking or coercing the United States and its allies with nuclear weapons of their own.”⁸⁶

As commonly noted, the priority of the United States President is to protect American citizens of all foreign enemies. This analysis seeks to offer a policy proposal that advises the Under Secretary of Defense for Policymaking to advocate for a policy double down on previous Obama administration nuclear modernization program proposals while continuing to maintain the status quo on the Russia-United States New START treaty of 2010. Also, the Obama administration prior to leaving office pondered the possibility of exercising the executive authority of the President to implement a new, U.S. no first strike policy with respect to use of nuclear weapons.⁸⁷ The use of a two-part policy in which the U.S. defense department commits to upgrading the nuclear triad, excluding a nuclear cruise missile, as well as a new posture on no first strike usage has the potential to foster new levels of geo-political peace worldwide.

The first component of this policy would be to issue an Executive Order stating that the U.S. is adopting a “No Nuclear First Strike” policy. In short, this policy “would allow the United States to launch nuclear weapons only if the enemy deployed them first. Such a change would be a dramatic policy shift: Washington has always kept the option of a preemptive strike on the table.”⁸⁸ The aim of such a policy would be to alter the landscape of the U.S. posture and rules of nuclear engagement with which the U.S. would use as its basis for potential nuclear conflict. As noted by Dominic Tierney of *The Atlantic*, “The policy reflects the power to set the

⁸⁶ Ibid

⁸⁷ Josh Rogin, "Obama plans major nuclear policy changes in his final months," The Washington Post, https://www.washingtonpost.com/opinions/global-opinions/obama-plans-major-nuclear-policy-changes-in-his-final-months/2016/07/10/fef3d5ca-4521-11e6-88d0-6adee48be8bc_story.html?utm_term=.83a11cb71f23.

⁸⁸ Tierney, Dominic . "Refusing to Nuke First." The Atlantic. September 14, 2016. <https://www.theatlantic.com/international/archive/2016/09/nuclear-obama-north-korea-pakistan/499676/>.

rules of war, rather than some wayward pacifist ideal to end all war. Countries that issue no-first-use pledges boast strong conventional militaries. These states want to encourage a model of war where their army meets the enemy on a conventional battlefield with clearly defined rules—the kind of war, in other words, that they usually win.”⁸⁹

Secondly, this proposal calls for the President and Defense Department authorize full-scale modernization of U.S. nuclear forces. The proposal would spend approximately \$ 300 billion dollars on modernizing the following systems over the next 30 years. Nuclear Submarine modernization funding should expect to receive close to \$130 billion dollars in funding, while new bombers will cost close to \$ 90 billion and finally a new fleet of ICBM’s would receive approximately 85 billion dollars in funding. These figures are derived from previous Obama Administration modernization proposals guided under Secretary of Defense Ash Carter.⁹⁰ As noted earlier, a double down on previous efforts of President Obama and his military advisers to modernize the nuclear triad serve as the basis for creating an environment of further arms reductions talks beyond New START. Ash Carter in January 2017 described the expectation that, "Over the next two decades, I expect the total cost of nuclear modernization to be approximately \$270 billion. Although this presents a long-term affordability challenge for DoD, I believe we must fund the enterprise to ensure that our nuclear deterrent continues to provide the President options and remains as safe, secure, and reliable as it is today." This policy proposal calls for specifically potential modernization and replacement of the Minuteman III ICBM, New ICBM (GBSD), a modernization of the B-2 Bomber, a modernized B-21 strike bomber, as well as a replacement to the current 14-submarine fleet of Ohio-class nuclear submarines.

⁸⁹ Ibid

⁹⁰ Reif, Kingston. "U.S. Nuclear Modernization Programs." Arms Control Association. February 2017. <https://www.armscontrol.org/factsheets/USNuclearModernization#SLBM>

President Trump and the Defense Department have the opportunity to preserve long-standing traditions of nuclear stability by amending the Obama modernization program and building on policy recommendations previously recommended by Stephen Young, a senior fellow for Human Rights at the State Department that calls for the removal of Nuclear Cruise missiles as part of the modernization package. Removal of the LRSO cruise missile component of the below Obama modernization plan would “lay the groundwork for eliminating this destabilizing class of nuclear weapons globally. Long-range, stealthy, high-speed nuclear-armed cruise missiles are a nightmare, one that the United States does not need and one the government should do everything it can to prevent other countries from obtaining.” By excluding the production of a new set of nuclear LRSO cruise missiles, fiscal budgets required to complete a modernization package by FY 2044 would cost approximately \$ 300 billion dollars for a 30 year modernization window proposed in this policy. This policy proposal takes into account that fears of a trillion dollar modernization program would be wasteful and counter to US deterrence goals. Current numerical figures being widely supported in defense circles as well as the current Joint Chief of Staff are straying from the previous \$1 Trillion modernization figure commonly associated with the Obama administration proposals. A \$1 trillion figure is closely aligned with CBO reports which focus not exclusively on acquisition costs but rather “the cost to field, operate, maintain, and modernize U.S. nuclear forces.”⁹¹ Air Force spokesman, Capt. Mark Graff, told CNBC a more precise figure the government is using for the nuclear recapitalization (or modernization) is about \$270 billion over more than 20 years.”⁹² In addition, the elements of the nuclear triad mentioned above represent modernization to what in various defense circles

⁹¹ Ibid

⁹² Daniels, Jeff . "Why a \$1 trillion endeavor to modernize the US nuclear arsenal could get more bipartisan support." CNBC. March 07, 2017. <http://www.cnbc.com/2017/03/07/why-modernizing-us-nuclear-arsenal-may-find-more-bipartisan-support.html>.

estimate as the most vulnerable elements of the nuclear triad. For example, the modernization of ground elements of the nuclear triad, in the form of a new ground-based Minuteman III, is already reportedly a top priority for current Secretary of State Mattis.⁹³ Also, the development of a new class of submarines is an urgent matter noted by the Arms Control Association, as “the service lives of the Navy’s 14 Trident Ohio-class ballistic missile submarines are being extended.”⁹⁴

Specifically, the goal of this policy is to remain steadfast in working towards nuclear parity with Russia through New START from a warhead count standpoint while also preserving the American commitment to maintaining the strongest nuclear deterrent worldwide. Nuclear parity for this analysis relates to total number of US and Russian net warhead figures. Fears of whether Russia will eventually reach the caps they promised to reach by 2018 are valid, as noted throughout this analysis. Nonetheless, the expectation is that by February 5, 2018, as stated in New START both the U.S. and Russia will meet the aggregate warhead limits laid out. These limits include:

- “700 deployed intercontinental ballistic missiles (ICBMs), deployed submarine-launched ballistic missiles (SLBMs), and deployed heavy bombers equipped for nuclear armaments;
- 1,550 nuclear warheads on deployed ICBMs, deployed SLBMs, and deployed heavy bombers equipped for nuclear armaments (each such heavy bomber is counted as one warhead toward this limit);

⁹³ Daniels, Jeff. "Trump's Defense secretary pick may have doubts about land-based nuclear missiles." CNBC. December 14, 2016. <http://www.cnbc.com/2016/12/14/trumps-defense-secretary-pick-may-have-doubts-about-land-based-nuclear-missiles.html>.

⁹⁴ Reif, Kingston. "U.S. Nuclear Modernization Programs." Arms Control Association. February 2017. <https://www.armscontrol.org/factsheets/USNuclearModernization#SLBM>

- 800 deployed and non-deployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments.”⁹⁵

An effective proposal to modernize the current US nuclear arsenal ultimately has the potential to outweigh and eliminate any strategic advantages Russia may seek to have from a quantitative standpoint if Putin decides to not abide by New START parameters. As reported by the Brookings Institution, “parity with Russia matters less today in strategic terms. In 2012, the Pentagon stated that even if Russia built up nuclear forces that exceeded New START’s limits, strategic stability would be maintained due to the secure U.S. second-strike capability, based primarily on SLBMs on submarines at sea.”⁹⁶

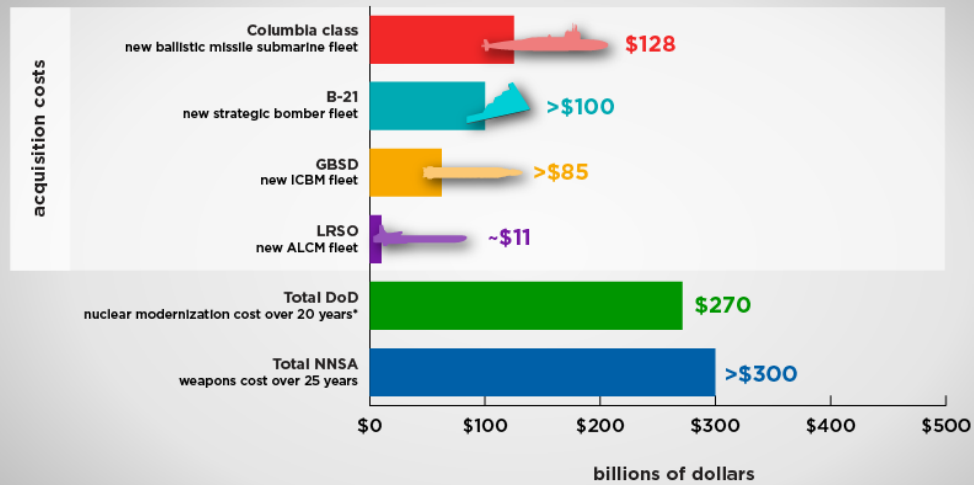
The **chart below**, from the Arms Control Association, provides a visual graphic of the acquisition costs of a 30 year, \$240-250 billion dollar Modernization plan, originally proposed near the conclusion of the Obama administration.⁹⁷

⁹⁵ "New START." U.S. Department of State. <https://www.state.gov/t/avc/newstart/>.

⁹⁶ Pifer, Steven. "Nuclear Modernization ." Brookings . October 25, 2016.
<https://www.brookings.edu/research/nuclear-modernization-arms-control-and-u-s-russia-relations/>.

⁹⁷ Reif, Kingston. "U.S. Nuclear Modernization Programs." Arms Control Association. February 2017.

Estimated Costs for Nuclear Triad Modernization



* In FY2017 constant dollars; includes only a small portion of the cost of the B-21
 Note: All figures in then-year dollars unless otherwise noted
 Sources: U.S. Navy, U.S. Air Force, Center for Strategic and International Studies,
 NNSA, DoD Cost Assessment and Program Evaluation (CAPE) office
 Updated February 3, 2017.

Arms Control
 Association

An upgrade to the current US nuclear triad is based upon the fundamental argument laid out in this analysis that “the United States’ arsenal should be designed to provide robust deterrence in the most difficult of plausible circumstances: during a conventional war against a nuclear armed adversary.”⁹⁸ A major reality is that as US conventional forces continue to become the dominating global force, further incentives for adversaries to resort to nuclear tactics during times of conventional war become an enhanced reality. As stated in previous modernization proposals by the Obama administration, it is recommended that the current Trump Administration consider a proposal that “those proposals include funding nuclear infrastructure (that is, the complex of national laboratories, production facilities, and personnel), extending the

⁹⁸ Press, Daryl, and Keir Leiber. "The Nukes We Need." Foreign Affairs. Nov. & dec. 2009. <https://www.foreignaffairs.com/articles/2009-11-01/nukes-we-need>.

life of aging warheads, and replacing old delivery systems.”⁹⁹ Furthermore, this modernization proposal offers a proposal which would enable the Defense Department to work with the Trump administration on focusing on ways to enhance the lowest yield, most accurate nuclear capabilities the U.S. can develop for the future. One way of achieving this accuracy goal through future modernization is following through on previous Obama era ambitions of “seeking funding for a nuclear-capable version of the F-35 Joint Strike Fighter and a nuclear-capable long-range bomber to replace the B-52 and B-2 bombers. Most noteworthy, the administration supports a modernization plan that would convert all remaining B-61 nuclear bombs into a single, low-yield version with increased accuracy.”¹⁰⁰ Finally, an additional aspect of this proposal is a modernization of the current nuclear submarine fleet the U.S. currently possesses. Future arms reductions will create a necessity for submarines to host a new era of modernized missiles. Double down on plans to modernize the Ohio-Class fleet could provide an option for “retaining the smaller U.S. arsenal's survivability.”¹⁰¹

This policy proposal is hinged on accomplishing a fundamental strategic goal of staying on a path to further nuclear disarmament while also maintaining the US position as the hegemonic global nuclear force. Former Assistant Secretary of State Stephen Rademaker touches on the goal of this type of policy. In an October 2016, New York Times op-ed, Rademaker reiterates a “fundamental strategic reality: the deeper the cuts to America’s nuclear arsenal, the greater the need for confidence in the reliability of our remaining weapons. This is particularly

⁹⁹ Leiber, Keir , and Daryl Press. "The Case for Modernizing America's Nukes." Foreign Affairs. July 06, 2011. <https://www.foreignaffairs.com/articles/2011-07-06/obamas-nuclear-upgrade>.

¹⁰⁰ Ibid

¹⁰¹ Ibid

true as Russia and China press forward with robust nuclear modernization programs.”¹⁰² To reiterate, the ultimate end goal of this policy proposal is that by remaining to continue US commitment to New START warhead parameters, the U.S. continues on a path of arms reduction with Russia while maintaining an ultimately more powerful and robust nuclear force through modernization. In addition, changing the course of U.S. policy through a no first strike policy lays the groundwork towards future arms control reduction talks to take place between the two parties.

Policy Authorization/Implementation

Nuclear modernization carries a unique set of policy authorization tools. Firstly, an upgrade to the current arsenal of the nuclear triad is based on not violating the current New START treaty which as mentioned throughout this analysis places a cap on U.S. and Russian warhead limits. However, those treaties do not contain language regarding modernization of the current U.S. arsenal. Obama garnered bi-partisan support for New START by leaving room for future nuclear modernization. It was noted that “As part of his effort to win Republican support for the New Strategic Arms Reduction Treaty (New START) in 2010, President Obama submitted to lawmakers a 10-year plan to maintain and modernize US nuclear warheads, strategic delivery systems, and their supporting infrastructure.”¹⁰³ To initiate large-scale spending on defense upgrades to various legs of the nuclear triad, a formal budget must be submitted to Congress. The President is responsible for assembling a budget that he ultimately proposes to Congress for approval. Concerning budgetary requests, for nuclear modernization,

¹⁰² Rademaker, Stephen . "President Obama's Plan is Effective for Deterrence." The New York Times , October 26, 2016. <http://www.nytimes.com/roomfordebate/2016/10/26/a-nuclear-arsenal-upgrade/president-obamas-plan-is-effective-for-deterrence>.

¹⁰³ Reif, Kingston . "Fact Sheet: New START and Nuclear Modernization Funding." The Center for Arms Control and Non Proliferation. August 22, 2013. <https://armscontrolcenter.org/fact-sheet-new-start-and-nuclear-modernization-funding/>.

this would specifically be handled through the National Defense Authorization Act for the fiscal year of the budget request.¹⁰⁴ The Trump Administration can seek the assistance of the National Nuclear Security Administration (NNSA) to develop a congressional budget request relating specifically to “weapons activities”.¹⁰⁵ Congress is ultimately responsible for authorizing each fiscal year defense budget. Furthermore, “The federal budget process occurs in two stages: appropriations and authorizations. This is an appropriations bill, which sets overall spending limits by agency or program. (Authorizations direct how federal funds should or should not be used.) Appropriations are typically made for single fiscal years (October 1 through September 30 of the next year).”¹⁰⁶

With respect to implementing a new policy of no U.S. nuclear first strike use, an executive action is an option with which President Trump is already familiar and comfortable. The Executive authority provides an effective and legal authorization tool that President Trump can utilize to alter the current U.S. nuclear posture. It is important to note that the President’s authority specifically from a defense perspective is already very limited by congressional checks. These include for example “power to declare war, raise and support the armed forces, make rules (i.e., laws) for the regulation of the armed forces, and provide for calling forth the militia of the several states.” Nonetheless, as the U.S. chief military commanders, presidential power is still open to interpretation via the Constitution specifically when it comes to handling the size and scope of military programs, assets, and personnel. These include situations “in which Congress has not acted to declare war.” A vast majority of presidential directives fall under a category of

¹⁰⁴ National Defense Authorization Act For Fiscal Year 2016 . November 25, 2015.
<https://www.congress.gov/114/plaws/publ92/PLAW-114publ92.pdf>.

¹⁰⁵ "November 2010 Update to the National Defense Authorization Act of FY2010 Section 1251 Rep." Los Alamos Study Group. http://www.lasg.org/CMRR/Sect1251_update_17Nov2010.pdf.

¹⁰⁶ "H.R. 5293 (114th): Department of Defense Appropriations Act, 2017." GovTrack.
<https://www.govtrack.us/congress/bills/114/hr5293>.

statements that “includes documents with written instructions from the President to executive branch officials on how they are to carry out their duties.” Finally, previous presidents have utilized the power of the presidency to implement executive action in regards to executive action. For example, Jimmy Carter issued Executive Order 12059 relating to functions surrounding nuclear non-proliferation. In short, a combination of executive authority and constitutional authority allow the president to pursue legally this type of adjustment to a no first use policy stance.

Regarding policy implementation tools, because a “no first use” policy as well modernization are not policies aimed at influencing citizen behavior, sermons are a viable source of policy implementation strategies. For example, as seen in 2010, the Obama Administration “spelled out its vision of modernization through the course of 2010. In February, soon after the release of the President’s budget, the Vice President gave a major address at the National Defense University in which he highlighted the need to invest in our nuclear work force and facilities.”¹⁰⁷ Information relayed to the public is a powerful way of garnering public support for proposed policies in the next administration. President Trump has shown to rely heavily on a variety of sermons methods to reiterate his policy goals. A March 2017 joint message to Congress laid out specific policy goals President Trump envisioned for his administration. Absent from this joint message was any specific discussion of nuclear policy. Future speeches to Congress could be used specifically to relay the political and economic pros of pursuing a no first use posture while pushing forward on wide-scale modernization. “Information as a public policy instrument covers government-directed attempts at influencing people through a transfer of knowledge, communication of reasoned argument, and moral suasion to achieve a policy

¹⁰⁷ November 2010 Update to the National Defense Authorization Act of FY2010 Section 1251 Rep." Los Alamos Study Group. http://www.lasg.org/CMRR/Sect1251_update_17Nov2010.pdf.

result.”¹⁰⁸ The current Trump administration has powerful tools at its disposal to use sermons expressed in the past as a “path towards nuclear zero” to maintain support for a strengthening of current forces while pursuing policies that provide the foundation for future arms cuts. President Trump would need to engage strong sermon campaign specifically as it relates to no first use policies. Former President Obama decided against such a formal declaration as it would have severe diplomatic ramifications for relationships with Japan and South Korea. According to White House sources, outgoing Secretary of State reiterated to President Obama “that a no first use pledge would also weaken the nuclear deterrent while Russia is running practice bombing runs over Europe and China.”¹⁰⁹

Policy Analysis

With respect to a proposal for heightened levels of nuclear modernization, a major question arises as follows: Why do we need modernized nuclear weapons systems to continue worldwide deterrence? Secondly and more importantly, from an effectiveness analysis standpoint, how exactly will modernization to our current nuclear forces foster or cultivate a greater sense of nuclear stability between Russia and the U.S.? Nuclear stability varies depending on the nature of the deterrence threat. Keith Payne of the National Institute of Public Policy notes that “the threat environment sets deterrence requirements, and the contemporary threat environment is particularly demanding because it is both severe and highly dynamic.”¹¹⁰ Literature suggests that the U.S. defense department was acting logically in avoiding modernization in the immediate post-Cold-War aftermath. Following the Cold-War, “The

¹⁰⁸ Benelmans-, Marie, Ray Cist, and Evert Vedung. *Carrots, Sticks and Sermons*. Piscataway, NJ: Transaction Publishers.

¹⁰⁹ “Obama unlikely to vow No First Use of Nuclear Weapons.” *The New York Times*, September 05, 2016. <https://www.nytimes.com/2016/09/06/science/obama-unlikely-to-vow-no-first-use-of-nuclear-weapons.html>.

¹¹⁰ Payne, Keith. “Nuclear Modernization in Today’s Environment?” National Institute of Public Policy. Accessed July 29, 2015. <http://www.nipp.org/wp-content/uploads/2015/08/Payne-STRAT-Symposium-2015-remarks.pdf>.

Warsaw Pact suddenly disbanded, the Soviet Union itself disintegrated, and Wilson won his nearly century-long ideological struggle with Lenin. Virtually everywhere, collectivism and centralization gave way to democracy and decentralization.”¹¹¹ Advocates of nuclear disarmament following the Cold-War argued a path towards “zero” was the logical step as the U.S. would still be able to maintain a conventional superiority worldwide. In his *book Nuclear Disarmament: Obstacles to Banishing the Bomb*, Jozef Goldblat highlights the consensus within policy circles that U.S. conventional superiority would serve as the foundation of nuclear disarmament. “Indeed, many American advocates of complete nuclear disarmament argue that this action should be taken because it would result in unassailable worldwide military supremacy of the United States through its conventional forces.”¹¹² Nonetheless, the broader definition of nuclear stability has changed today given new shifts in the geo-political climate. The nuclear threat has now shifted to not only include threats to the U.S. but to regional, non-nuclear states. This analysis is of the view that nuclear stability is the no use of any nuclear weapons by any state, as well as the prevention of any other non-current nuclear states from acquiring nuclear arms. This is evident in Russia’s recent ambivalent attitude towards mutually assured destruction. Rather, “Russia’s doctrine today is not a replay of “stable” mutual deterrence or NATO’s flexible response doctrine. No, it includes nuclear coercion based on selective nuclear first-use threats in non-nuclear contingencies.”¹¹³ Multiple strains of thought regarding the potential for or inability of nuclear modernization to effectively foster deterrence to Russia are presented in this analysis. Robert Scher, former Assistant Secretary of Defense for Strategy,

¹¹¹ Maynes, Charles William. "Squandering Triumph: The West Botched the Post-Cold-War World ." *Foreign Affairs*. Jan. & Feb. 1999. <https://www.foreignaffairs.com/articles/1999-01-01/squandering-triumph-west-botched-post-cold-war-world>.

¹¹² Goldblat, Jozef. *Nuclear Disarmament: Obstacles to Banishing the Bomb*. London : I.B. Taurus & Co. Ltd. 2000.

¹¹³ Payne, Keith. "Nuclear Modernization in Today’s Environment?" *National Institute of Public Policy*. Accessed July 29, 2015. <http://www.nipp.org/wp-content/uploads/2015/08/Payne-STRAT-Symposium-2015-remarks.pdf>.

Plans, and Capabilities, has noted that “It is clear that other countries will continue to possess nuclear weapons well past the service lives of our existing systems, which have already been in use decades longer than originally planned. Modernization is thus essential to the President’s commitment to sustain a safe, secure, and effective nuclear arsenal for as long as nuclear weapons exist.”¹¹⁴

Those who argue for modernization cite the age of our current nuclear triad as major concern in delivering effective nuclear deterrence to Russia. Stephen Rademaker, former Assistant Secretary of State from 2002-2006 has noted that “The average age of our B-52 bombers is 52 years, of our intercontinental ballistic missiles 35 years, and our nuclear submarines 24 years. None of these systems were built to last forever. All three legs of the nuclear triad — strategic bombers, intercontinental ballistic missiles and submarine-launched ballistic missiles — need to be upgraded.”¹¹⁵ As stated earlier in this policy proposal, nuclear modernization is the center piece of US commitment towards a path of future arms reductions and global nuclear disarmament. One goal of modernization is creating a level of U.S. dominance that fosters a greater ability for arms reductions to occur not out of desperation but out of U.S. direction and leverage. There are many who advocate that nuclear modernization’s effectiveness is measured in what is the perception of setting the stage or security climate for future arms reductions. Kroenig states in his research how “all states should work to reduce international tensions so that disarmament might be achieved in the future. If and when security threats are reduced sufficiently, nuclear draw- downs will easily follow. But in the meantime,

¹¹⁴ Scher, Robert . "Nuclear Modernization: Is it needed and can we afford it?" Center for Strategic and International Studies . 2016. https://csis-prod.s3.amazonaws.com/s3fs-public/event/ASD%20Scher%20Modernization%20Remarks_0.pdf.

¹¹⁵ Rademaker, Stephen . "President Obama's Plan is Effective for Deterrence." The New York Times , October 26, 2016. <http://www.nytimes.com/roomfordebate/2016/10/26/a-nuclear-arsenal-upgrade/president-obamas-plan-is-effective-for-deterrence>.

simply allowing the US arsenal to rust away will not meaning-fully affect chances for eliminating nuclear weapons worldwide.”¹¹⁶

Supporters of modernization argue that upgrades beginning today are effective in delivering deterrence in the wake of recent Russian annexation of Crimea. The argument is that recent Eastern European aggressions are indicators that the potential for immediate reductions following the expiration of New START are bleak. Nonetheless, counter to this argument is the view from several detractors of modernization who note that the U.S. maintained a significant nuclear superiority over the USSR during multiple timeframes before the Cold-War, yet that did not deter Russia from invading Czecholovakia (68). In their book, *International Ethics Defense*, Lawrence A. Alexander and Larry Alexander cite trends showing how the USSR was not deterred by U.S. nuclear advantages in any of their Warsaw pact hostilities and subsequent invasions. The authors note that “The effectiveness of nuclear threats as a deterrent to Soviet aggression or Communist expansion was and remains barely credible...The threat to use nuclear weapons did not prevent the subversion pf Czechoslovakia, the blockade of Berlin, the collapse of Chiang Kai-Shek, the fall of Dienbienphu, or the invasion of Hungary, all of which occurred before the Soviet Union could effectively deter an American nuclear strike with nuclear weapons of its own.”¹¹⁷

Commentators have asserted that “the Ukraine crisis seems likely to further slow the arms-control process. And, in general, the relatively sluggish reduction rate suggests that U.S. and Russian arsenals are not so much headed toward zero as plateauing for the foreseeable

¹¹⁶ Ibid

¹¹⁷ Alexander, Lawrence , and Larry Alexander. *International Ethics*. Princeton, NJ: Princeton University Press, 1985.

future.”¹¹⁸ Direct evidence shows that from a pure modernization standpoint, U.S. options to modernize at the very least maintain a level playing field from a capability standpoint. While not necessarily expanding our arsenal, a U.S. advantage in modernization counters already reported Russian efforts to modernize. It is reported that Russia “is developing three new land-based missiles, including an SS-27 intercontinental ballistic missile modified so it can carry multiple warheads that can be aimed at different targets, thereby expanding the lethality of each missile. Its ballistic submarines are also set to be modernized, with eight new subs that reportedly will be able to launch 16 missiles, each capable of carrying up to six independently targetable warheads—again increasing the number of targets that can be attacked.”¹¹⁹ Proponents of modernization argue for effectiveness noting that advancements in the current arsenal are vital to the U.S. second strike capabilities. For example, “If the U.S. were to eliminate its entire nuclear arsenal, armed states like Russia would utilize nuclear stockpiles as leverage to coerce or attack the U.S. and its allies. The best way to complicate the calculus of Russia (or that of any rogue nation that desires to launch a nuclear attack) is by boosting missile defenses of the U.S. homeland and maintaining an assured second-strike capability.”¹²⁰

The preservation of peace, while abstract in theory, can still represent a real and tangible metric in the number of nuclear-armed states that may or may not arise as a result of U.S. failure and or success in nuclear modernization goals. The goal of modernization in this policy is to create an environment that pressures Russia to come back to the negotiating table for further arms reductions talks. Proponents of modernization argue that the less nuclear capable states

¹¹⁸ John Mecklin . "Disarm and Modernize." Foreign Policy. Accessed April 4, 2017.
<http://foreignpolicy.com/2015/03/24/disarm-and-modernize-nuclear-weapons-warheads/>.

¹¹⁹ Ibid

¹²⁰ Baroudos, Constance . "Nuclear Deterrence: Still Relevant Against Russia." The National Interest. April 27, 2016.
<http://nationalinterest.org/blog/the-buzz/nuclear-deterrence-still-relevant-against-russia-15961>.

there are, the greater the chance future successful arms talks/cuts from Russia can bear fruition. In his research, Evan Montgomery has reiterated that “the United States could actually become more reliant on nuclear weapons due to a confluence of factors. Most importantly, additional regional powers might acquire nuclear weapons or the ability to produce them. As a result, Washington could take on extra security commitments to discourage those nations from committing acts of aggression.”¹²¹ Particularly as it relates to NATO allies, the U.S. has been able to extend the nuclear deterrence umbrella post-Cold-War while managing to keep the number of nuclear powers since 1991 at a relatively stable state.

Forecasting is a significant policy analysis tool the Trump administration will have in building support for the effectiveness of modernization. Defense analysts highlight that modernization is effective in countering Russian reluctance to future Arm’s cuts. “The U.S. government in 2014 announced that Russia had violated the 1987 Intermediate-range Nuclear Forces (INF) Treaty by testing a ground-launched cruise missile of intermediate range. (U.S. allies in Europe and Asia want to see the treaty preserved.)¹²² Proponents of nuclear modernization contend that upgrades to U.S. air, sea bomber capabilities in turn cause a net reduction in the amount of Eastern European allies seeking nuclear capabilities themselves. As a result, deterrence is enhanced while eliminating further regional instability. “If America’s extended deterrence did not reassure allies, more countries in Europe would likely have nuclear weapons to deter Russian threats and attacks, especially with Moscow’s invasion of Ukraine and

¹²¹ Montgomery, Evan . "The Future of America's Strategic Nuclear Deterrent . " Center for Strategic and Budgetary Assessments. November 2013. <http://csbaonline.org/uploads/documents/The-Future-of-Americas-Strategic-Nuclear-DeterrentU.pdf>.

¹²² Pifer, Steven . "Nuclear modernization, arms control, and U.S.-Russia relations." The Brookings Institution. October 25, 2016. <https://www.brookings.edu/research/nuclear-modernization-arms-control-and-u-s-russia-relations/>.

its recent liberal threats of employing nukes.”¹²³ This also relates directly to a policy analysis lens of technological capacity. A benefit of moving forward with modernization makes negotiating with Russia more likely because modernization of all legs of the triad makes technological capacity of all elements of the triad strategically advantageous against the Russian who still face major lags in their innovative process to several of their delivery and missile systems.¹²⁴

Equality is often a tool used in measuring potential positive effects of public policy. Nuclear modernization is undoubtedly an appropriate setting to observe the effects of U.S. modernization on the concept of parity, strength and fairness in achieving nuclear policy goals. As alluded to in previous sections of this analysis, Russia has consistently been observed as using New START treaty loopholes to their advantage. History indicates that “the Soviet Union and its successor state Russia have consistently violated their arms control treaty obligations and formal pledges since the beginning of modern arms control in 1972... Most of the strategic weapons Russia has today violate its legal obligations, political commitments or U.S. interpretation of previous agreements. This includes the SS-18 mod 5, the SS-25, and the MIRVed version of the SS-27 missiles. The same will likely be obvious when the New START Treaty expires in 2021 (or 2026 if it is extended).”¹²⁵ The nominal strategic advantage the U.S. may carry in the wake of absent modernization efforts could be misleading. From an equality standpoint, modernization has the potential to afford

¹²³ Baradous , Constance Baroudos. "Why America Must Modernize Its Nuclear Bombers, Submarines, and Missiles." The National Interest. July 15, 2016. <http://nationalinterest.org/blog/the-buzz/why-america-must-modernize-its-nuclear-bombers-submarines-17003>.

¹²⁴ Montgomery, Evan . "The Future of America's Strategic Nuclear Deterrent ." Center for Strategic and Budgetary Assessments. November 2013. <http://csbaonline.org/uploads/documents/The-Future-of-Americas-Strategic-Nuclear-DeterrentU.pdf>.

¹²⁵ Schneider, Mark. "New START: The Anatomy of a Failed Negotiation." National Institute for Public Policy. July, 2016. <http://www.nipp.org/wp-content/uploads/2014/12/New-start.pdf>

Eastern European equal levels of deterrence under the American Nuclear umbrella. Observers have stated that “New START is having no impact on Russian nuclear force modernization and Russia has decided to increase its forces to the New START levels. Actual force levels could be higher than the notional New START limits on warheads and delivery vehicles because so many things do not count under New START and bomber weapons are discounted.”¹²⁶

Modernization of the fleet of current Ohio-class nuclear submarines is critical in forecasting an Eastern European region of which finds itself in a volatile climate. One significant advantage, modernization to the current U.S. nuclear submarine fleet provides is that it effectively may instill new levels of deterrence to Russia without having to distribute nuclear weapons directly into the hands of allied nations. Deterrence as noted throughout this analysis is rooted in instilling a sense among Russia that the U.S. has the ability to survive and provide overwhelming consequences in the wake of our second strike capabilities. Instead of relying on the nuclear response capabilities of allied regions in Eastern Europe, a strong fleet of submarines serves as an effective to ongoing efforts of the Russian government to modernize their own nuclear submarine fleet.¹²⁷ Furthermore, in a world where transferring nuclear weapons across land based allies is considered highly dangerous, maintaining regional nuclear deterrence is possible with a modernized fleet of nuclear submarines. Also, “Expanding non-strategic weapons will also provide Washington with capabilities to enhance extended deterrence and assure allies that developing their own nuclear weapons is unnecessary. While the expense of modernizing and maintaining the triad is considerable, it pales in comparison with the costs that even a limited

¹²⁶ Ibid

¹²⁷ Schmitt, Eric . "Russia Bolsters Its Submarine Fleet, and Tensions with U.S. Rise." The New York Times , April 20, 2016. https://www.nytimes.com/2016/04/21/world/europe/russia-bolsters-submarine-fleet-and-tensions-with-us-rise.html?_r=0.

nuclear exchange would impose.”¹²⁸ In addition, a major pro often discussed in previous Obama nuclear thinkers, is the idea of creating a more reliable but smaller nuclear arsenal. Modernizing is seen as effective in continuing trends of no net arms increases while diminishing the ultimate chance of nuclear use. Obama “lieutenants argue that modernizing existing weapons can produce a smaller and more reliable arsenal while making their use less likely because of the threat they can pose. The changes, they say, are improvements rather than wholesale redesigns, fulfilling the president’s pledge to make no new nuclear arms.” If the basis of this policy proposal is deterrence, a commitment to no new arms increases but a modernized approach to updating the nuclear triad is effective in maintaining Russian deterrence because Russia will realize that upgrades to their arsenal will not survive the second strike capabilities of an advanced U.S. arsenal. Historical evidence shows that U.S. attack submarines already have superiority to Russian nuclear submarines as “American Navy officials and Western analysts say that American attack submarines, which are made for speed, endurance and stealth to deploy far from American shores, remain superior to their Russian counterparts.”¹²⁹ Were the U.S. to make significant improvements to an already numerical submarine advantage, the qualitative and quantitative superiority over Russia’s sea based leg of the nuclear triad may prove difficult to counter for an already suffering Russian economy.

With respect to how modernization has effectively enabled a climate of Russian deterrence, there is historical evidence that would suggest that qualitative advantages have deescalated US.-Russian conflict previously. Nuclear Modernization efforts throughout the

¹²⁸ Baradous , Constance Baroudos. "Why America Must Modernize Its Nuclear Bombers, Submarines, and Missiles." The National Interest. July 15, 2016. <http://nationalinterest.org/blog/the-buzz/why-america-must-modernize-its-nuclear-bombers-submarines-17003>.

¹²⁹ Schmitt, Eric . "Russia Bolsters Its Submarine Fleet, and Tensions with U.S. Rise." The New York Times , April 20, 2016. https://www.nytimes.com/2016/04/21/world/europe/russia-bolsters-submarine-fleet-and-tensions-with-us-rise.html?_r=0.

1970's although not as expansive as this proposal show historical evidence of serving as an effective Russian deterrence. "In the 1970s, budget constraints forced the cancellation of the B-70 bomber; cut the purchase of FB-111s by 70 percent; cut the procurement of Peacekeeper missiles by 75 percent, and resulted in 12 fewer ballistic-missile submarines being built than originally planned. Despite those cuts, the United States successfully deterred a Soviet Union that possessed larger conventional and strategic forces and also concluded several arms-control agreements."¹³⁰

Cost undoubtedly is a major aspect of modernization and its reception amongst Congress, those in defense circles as well as the general public. In particular, the aspect of this policy proposal eliminating plans to modernize the LRSO cruise missile provides a significant benefit in cost-savings. As a result, "In addition to the savings generated by the cancellation of the Minuteman III replacement programme and the LRSO cruise missile, the costs associated with the warheads for these systems would also be eliminated. Expensive life-extension programmes for the W78 and W87 ICBM warheads, and the W80 cruise-missile warhead could be cancelled and the warheads retired."¹³¹ From an efficiency standpoint, a pro of double-down on modernization also mitigates against risks commonly associated with preserving the life cycle of outdated aspects of the current nuclear triad. The costs associated with a specific series of modernization efforts to direct elements of the nuclear triad may outweigh the unknown costs of an already aged and stretched nuclear triad. "In 2008, Secretary of Defense Robert Gates

¹³⁰ Korb, Lawrence , and Adam Mount. "Setting Priorities for Nuclear Modernization." Center for American Progress. February 2016. <https://cdn.americanprogress.org/wp-content/uploads/2016/02/03053017/NuclearArsenal2.pdf>.

¹³¹ James E. Doyle (2016) Better Ways to Modernize the US Nuclear Arsenal, *Survival*, 58:4, 27-50, DOI: 10.1080/00396338.2016.1207946

characterized the U.S. nuclear arsenal's long-term prognosis as "bleak."¹³² Finally, a benefit that the Trump Administration could consider in this proposal is that because of the elimination in this proposal of the LRSO cruise missile (a savings of 60 \$ Billion Dollars¹³³) would further reduce the amount of defense budget consumed by nuclear modernization. The previous Obama modernization program calls for a cruise missile upgrade. That modernization program did not break away from any historical precedent of how much the nuclear goals of the defense department were covered from the defense budget. During a 2016 speech from then Secretary of Defense Ash Carter, he reiterated how "most people do not realize that spending on the nuclear program is a small percentage of total defense spending. At its peak, nuclear spending would make up about five percent of the Pentagon's budget, which is now around \$600 billion annually."¹³⁴

Opposing views suggest that as it relates to the other defense budgetary constraints, the costs of nuclear modernization could have significant consequences for maintaining and updating various elements of the military. The Arms Control Association notes that if "the Air Force and Navy still plan to pursue nuclear modernization programs that will increase spending from today's \$18 billion to more than \$30 billion per year."¹³⁵ This increased level of spending has significant consequences across all branches of the military. For example, plans to construct a new fleet of Navy ships may have to be eliminated or delayed "to pay for 12 new ballistic missile submarines and stay within the current shipbuilding budget."¹³⁶ The Committee for a

¹³² Time to Modernize and Revitalize the Nuclear Triad. January 27, 2012.

<http://www.heritage.org/defense/report/time-modernize-and-revitalize-the-nuclear-triad>.

¹³³ Torbati, Yeganeh . "Cost of modernizing U.S. nuclear weapons to fall to next president." Reuters. September 26, 2016. <http://www.reuters.com/article/us-usa-nuclear-future-idUSKCN11W2IW>.

¹³⁴ Ibid

¹³⁵ Woolf, Amy. "Nuclear Modernization in the Age of Austerity." Arms Control Association. March 04, 2014.

https://www.armscontrol.org/act/2013_03/Nuclear-Modernization-in-an-Age-of-Austerity.

¹³⁶ Ibid

Responsible Federal Budget has already highlighted areas of Trump’s defense spending plans and how they would affect the overall fiscal outlook. Missile defense modernization is an area of fiscal criticism from CFRB. They note how “These expansions could not be paid for under the current defense discretionary spending caps. In part, Trump would pay for them by requiring other countries to take more responsibility for their defense needs or reimburse the U.S. for some of the defense provided.”¹³⁷

Some have noted that the cost-benefit analysis of nuclear modernization identifies a trend-line in benefits of upgrading current aspects of the nuclear triad. Evan Montgomery and Todd Harrison of the Center for Strategic Budgetary Assessments point out figures that point to the cost savings of modernization. In their assessment, Montgomery and Harrison point that “Fully half of the entire nuclear deterrent funding for the next ten years for the bomber, land based missiles and submarines will not be spent on new modern systems to replace our aging deterrent but on sustaining our old systems we failed to replace.”¹³⁸ The problem lies in the fact that modernization to our current weapons arsenal has been delayed now for multiple decades. Montgomery and Harrison used 10 years as a timeframe snapshot to compare the costs of maintaining the current arsenal versus the 10 year aggregate cost of the Obama modernization proposal. An advantage of this current policy proposal lies in the statistical findings of Harrison and Montgomery in which they note that “to simply sustain the old Triad systems will cost \$67.8 billion over the next decade. This is more than the modernization bill of \$67.2 billion.”¹³⁹ From an administrative capacity standpoint, the Trump administration will be pleasantly surprised to

¹³⁷ "Promises and Price Tags: An Update." Committee for a Responsible Federal Budget. September 22, 2016. <http://www.crfb.org/papers/promises-and-price-tags-preliminary-update>.

¹³⁸ Huessy, Peter. "The True Cost of Nuclear Deterrence." Real Clear Defense. July 28, 2016. http://www.realcleardefense.com/articles/2016/07/28/the_true_cost_of_nuclear_deterrence_109635.html.

¹³⁹ Harrison , Todd, and Evan Montgomery. "The Cost of Nuclear Forces." Center for Strategic and Budgetary Assessments . 2015. http://csbaonline.org/uploads/documents/CSBA-NCS_Resize_FINAL_WEB.pdf.

hear feedback on how tweaking of federal tax plans can alleviate the costs of a nuclear modernization budget proposal. For instance, “Properly done, a pro-growth tax plan can easily generate \$300 billion more in revenue each year. With unfunded entitlement liabilities approaching \$100 trillion over the next 70 years, reform in that area is a no-brainer.”¹⁴⁰

While there are certainly various pro’s that can be identified in implementing the policy provided in this analysis, there are an array of negative or unintended consequences associated with this policy that must be considered. Proponents against reinvigorated nuclear modernization have highlighted the counter-productive dimensions of modernization with respect to continuing towards a path of Russian-U.S. disarmament. As noted earlier, previous discussions on nuclear modernization have “inflamed debate about the depth of the U.S. commitment to the Nuclear Non-Proliferation Treaty (NPT), which allows the United States, Russia, China, the United Kingdom, and France to have nuclear weapons if they promise to eventually disarm.”¹⁴¹ Although previous analysis above notes the positive deterrence results that arise from gains in modernization, there is a variety of literature that suggest the negative consequences of a modernization policy serve as the catalyst for a new generation of hostile arms competition among between Russia and the U.S. Evidence points to trends showing “Countries with nuclear weapons have recently embarked on highly ambitious and costly programs, largely unexamined outside national security circles, to renew the strategic and tactical weapons in their arsenals.”¹⁴² The danger in engaging in a new era of modernization lies in disrupting the calculus set in the Nuclear Nonproliferation Treaty as well as Comprehensive Test Ban Treaty which all serve as the foundation for creating a world with as few nuclear states as possible. It is worth

¹⁴⁰ Huessy, Peter. "The True Cost of Nuclear Deterrence." Real Clear Defense. July 28, 2016.

¹⁴¹ John Mecklin . "Disarm and Modernize." Foreign Policy. Accessed April 4, 2017.
<http://foreignpolicy.com/2015/03/24/disarm-and-modernize-nuclear-weapons-warheads/>.

¹⁴² Ibid

noting that the latest round of arms reductions through New START does not mandate destruction of nuclear weapons but simply place a cap on those warheads of which can be deployed. There lies the real potential for deterrence to be in jeopardy as much of the assumption in U.S. policy the last several years has been that Russia would not break away from New START warhead parameters.

The assumption from the U.S. policymaking point of view is that so long as continued reductions in the arsenal sizes of Russia and the U.S. continue, the Russian advantages in deployed warheads would be outweighed by American qualitative superiority with respect to nuclear capability. However, up until 2013, analysts have observed that “reductions were at a much slower pace than those in the previous five-year period (2008-2013), when Washington nixed more than 3,000 weapons and Moscow roughly 2,500 in a spring-cleaning of outdated and unreliable arsenals.”¹⁴³ It is here that the root of this policy is called into question. What is the chance that a full-fledged US nuclear modernization does push Russia towards future arms reductions talks towards a path to zero? Historical evidence suggests that Russia does not shy away from arms-race competition. Current long term forecasting of Russian modernization plans show that Moscow has pushed forwards on plans to upgrade all three legs of their nuclear triad. As reported in Foreign Policy, “The Russian bomber force is also being upgraded, with plans for a relatively slow but super-stealthy flying wing, known as the PAK-DA, apparently going forward. A new nuclear- capable cruise missile, long in development, appears to be nearing operational status; the new Iskander-M SS-26 short-range tactical nuclear missile—a mobile system with two missiles per carrier—is being rolled out, and the Su-34 Fullback fighter-bomber

¹⁴³ Ibid

is replacing 1970s-era planes as a platform for tactical nuclear strikes.”¹⁴⁴ All of this is to say that deterrence worldwide could be heavily altered negatively as new states would be observant of modernization completion occurring between Russia and the U.S. and be motivated to carry out new levels of nuclear testing and scientific development. Although modernization is with the goal of deterring a Russian first strike, unavoidable consequences could come in the form of rogue states as well as volatile political regimes opting to use nuclear force in regional conflict.¹⁴⁵

Often times, nuclear defense and conventional force structuring are said to be two schools of thought. However, an objective critique of a plan to modernize all aspects of the nuclear triad may have unintended consequences on the administrative capacity of the Defense Department to carry out all of its military goals. In particular, the Trump Administration must consider what ramifications there are for investing in qualitative superiority from a nuclear modernization standpoint while neglecting what is the American best form of superiority in regards to conventional military strength. The issue lies that in a 30 year plan for modernization, objectors to modernization note that the price tag to complete the transaction for modernization target dates in the 2020’s will likely come at the same time that conventional forces are scheduled for modernization.¹⁴⁶ Opponents of similar modernization packages have stated that costs of upgrading the Triad will place increasing pressure on the survivability of other sectors of the military and defense apparatus. Kingston Reig of the Arms Control Association has made clear in his research that “It also obscures the fact that the plans exceed what the president has deemed is required for nuclear deterrence and prioritizing the nuclear mission runs a high risk of forcing

¹⁴⁴ Ibid

¹⁴⁵ Ibid

¹⁴⁶ Ibid

counterproductive cuts to both nuclear and other defense and national security priorities.”¹⁴⁷

Objectors of steep nuclear modernization have conversely advised previous President Obama to focus on sustaining the conventional force advantage the U.S. currently holds over Russia.

In addition, there are widely held views that a modernization of current forces will not necessarily have significant impact on the current deterrence calculus. There are many that advocate that a modernization policy will have no direct correlation on impacting Russian deterrence due to the view that the U.S. already has a distinct strategic advantage. For example, “The number of deployed ICBMs, SLBMs and strategic bombers for the United States was 794, compared to 528 for Russia. There exists a balance in deployed strategic warheads, with the U.S. military holding a substantial numerical advantage in the number of deployed strategic delivery vehicles. That advantage will persist for many years.”¹⁴⁸ Furthermore, the U.S. has not exhausted all opportunities for the amounts of warheads that can be deployed SLBM missiles can carry. For instance, “All Minuteman III ICBMs have been downloaded to carry a single warhead, even though two-thirds of them could carry three.”¹⁴⁹

Steven Pifer points out that even if Russia decides to withdraw from New START and increase modernization efforts, the U.S. would still hold overwhelming advantage due to the “large number of non-deployed nuclear warheads in storage. If New START were to break down, the United States could add hundreds of nuclear warheads-well over 1,000-to its strategic ballistic missile force. The Russian strategic ballistic missile force has nowhere near the capacity

¹⁴⁷ Reif, Kingston . "No, Nuclear Modernization Doesn't Cost Less Than You Think." Arms Control Association . August 3, 2016. <https://www.armscontrol.org/blog/ArmsControlNow/2016-08-03/No-Nuclear-Modernization-Doesnt-Cost-Less-Than-You-Think>.

¹⁴⁸ Pifer, Steven. "Overblown: Russia's empty nuclear saber-rattling." The Brookings Institution . March 17, 2015. <https://www.brookings.edu/opinions/overblown-russias-empty-nuclear-sabre-rattling/>.

¹⁴⁹ Ibid

to match that.”¹⁵⁰ What does this mean for policy effectiveness? It raises the question of whether or not modernization will truly have an impact on Russia and their nuclear endeavors. Current forecasts are already indicating that Russia is well underway with their nuclear modernization efforts. A decision to invest hundreds of billions in all three legs of the American triad may not have much of a significant impact on the nuclear goals of Russia going forward. Nonetheless, Russia still has a difficult road ahead of them in ever reaching close to the nuclear power the U.S. possesses. As Pifer notes history is clearly not on the side of Russia. After the fall of the Soviet Union, “Defense spending crashed, and the Russian military bought little in the way of new strategic weapons in the 1990s and early 2000s. Many missiles, such as the SS-18 and SS-19 ICBMs—which today still carry about one-half of Russia’s deployed strategic warheads—have reached and passed their service warranty dates.”¹⁵¹ However, if the ultimate goal of a U.S. modernization policy is too slow down increases in Russian warheads and nuclear hostility, it may be already too late to bring Putin to the negotiating table as absent of Obama era modernization, Russia has been full steam ahead on “developing the new Sarmat ICBM, which will reportedly be capable of carrying as many as ten-fifteen warheads.”¹⁵²

Submarine Launched Ballistic Missiles offer an interesting case study to evaluate the negative consequence that a U.S. modernization policy might have in that the U.S. may already have qualitative nuclear advantages that have nothing to do with the age of our arsenal. Deterrence is focused on the projection of power and what our second strike capabilities are coming from all aspects of our trident. SLBM innovation may prove to be wasteful and an inefficient allocation of American resources based on historical statistical data we already have

¹⁵⁰ Ibid

¹⁵¹ Ibid

¹⁵² Ibid

on Russia/U.S. SLBM operational effectiveness. An example of this is with the Russian Bulava SLBM as well as the American Trident D-5 counterpart. As noted by Pifer, “Newer does not always equate to better. The Bulava missile has failed in roughly 40 percent of its 21 flight tests over the past ten years. The older Trident D-5, on the other hand, has a stunning record of more than 140 consecutive successful flight tests.”¹⁵³

Cost is always a recurring around the defense community. Plans for nuclear modernization undoubtedly have the potential to impose significant cost burdens to the U.S. In particular, the Congressional Budget Office has presented significantly different financial analyses compared to those conducted by supporters of modernization. In particular, a key element to CBO’s February 2017 report is their difference in analysis of how much modernization may consume the total budget. Earlier in this report, I cite the works of advocates who claim net increased in nuclear consumption to the overall budget would remain stable at approximately 5 %. However, in their analysis, the CBO estimates that “Nuclear forces account for roughly 6 percent of the total 10-year costs of the plans for national defense outlined last year in the departments’ 2017 budget requests, CBO estimates. On an annual basis, that percentage is projected to rise from 5 percent in 2017 to slightly less than 7 percent in 2026.”¹⁵⁴ Finally, the costs associated with acquisition of modernized nuclear weapons may not account for elevated costs of maintaining current parts of the nuclear triad of which are to be preserved. While the CBO does not have direct costs for these soon to be pending activities, they are certainly threats to the defense budget for the foreseeable future. According to CBO, these include the costs of “addressing the nuclear legacy of the Cold War (such as dismantling retired nuclear weapons

¹⁵³ Ibid

¹⁵⁴ "Projected Costs of U.S. Nuclear Forces, 2017 to 2026." Congressional Budget Office. February 2017. <https://www.cbo.gov/sites/default/files/115th-congress-2017-2018/reports/52401-nuclearcosts.pdf>.

and cleaning up environmental contamination from past activities at nuclear facilities); the costs of reducing the threat from other countries' nuclear weapons and the costs of developing and maintaining active defenses against other countries' nuclear weapons (primarily ballistic missiles)."¹⁵⁵ Some alternatives to alleviate heavy costs have been proposed. Barry Blechman, co-founder of the Stimson Center has recommended cost saving policies that coincide elements of this policy proposal emphasizing a forego on modernizing cruise missiles. Blechman has recommended "continuing plans to build a new strategic bomber, the B-21, with a high priority and, assuming it can be kept on schedule and cost, canceling plans to build a new strategic cruise missile to arm it."¹⁵⁶

Political Analysis

The domestic/international politics of nuclear force modernization are crucial to consider. First, John McCain represents a key player in Congress for his often moderate stance on a variety of legislative matters. Nonetheless, nuclear modernization is an area where Trump and McCain can find political commonalities in their approach towards nuclear force structure ambitions. McCain's support is rooted in establishing a strong nuclear deterrent for NATO. In recent Congressional testimony, McCain said, "In light of the most recent developments, it is time for the new administration to take immediate action to enhance our deterrent posture in Europe and protect our allies. More broadly, we must continue the ongoing modernization of U.S. nuclear forces and ensure that NATO's nuclear deterrence forces are survivable, well-exercised, and increasingly ready to counter Russian nuclear doctrine, which calls for the first use of nuclear

¹⁵⁵ Ibid

¹⁵⁶ Blechman, Barry. "A Trillion-Dollar Nuclear Weapon Modernization is Unnecessary." The New York Times, October 26, 2016. <http://www.nytimes.com/roomfordebate/2016/10/26/a-nuclear-arsenal-upgrade/a-trillion-dollar-nuclear-weapon-modernization-is-unnecessary>.

weapons.”¹⁵⁷

McCain’s supportive stance towards modernization represents the broad levels of bipartisan consensus in Congress supporting a nuclear modernization overhaul. McCain and Trump share a common claim that the military was weakened under the Obama administration. In his recommendations for the 2018-FY 2022 defense budget, McCain urged members of Congress to undergo modernization without delay. McCain specifically highlights various key elements of nuclear modernization that should take heightened priority. These include maintaining “new START treaty force levels of 400 ICBM’s, 240 submarines launched ballistic missiles on 12 nuclear submarines and 60 strategic bombers, replacing the Ohio-class ballistic submarine, replacing the air-launched cruise missile (ALCM).”¹⁵⁸

Politically, there are clear indicators that the Trump administration may be able to garner significant support for nuclear modernization among key Democrats and Republicans. For example, many Democrats’ home districts are geographic locations where nuclear arms are built and maintained. In July of 2016, a bipartisan group of senators, including recent Democrat Vice-President Candidate Tim Kaine, drafted a letter to the Obama administration backing nuclear modernization.¹⁵⁹ Within the Democratic party, there are signs of clear ideological schisms surrounding nuclear defense spending. During the Democratic National Convention in Philadelphia, there were calls to adopt a party platform focusing on “reducing our reliance on nuclear weapons while meeting our national security obligations. Democrats will also seek new

¹⁵⁷ "Statement by SASC Chairman John McCain on Russia's Deployment of Cruise Missiles in Violation of INF Treaty." John McCain. February 14, 2017. <https://www.mccain.senate.gov/public/index.cfm/2017/2/statement-by-sasc-chairman-john-mccain-on-russia-s-deployment-of-cruise-missiles-in-violation-of-inf-treaty>.

¹⁵⁸ McCain, John . "Restoring American Power." Senate Armed Services Committee. https://www.mccain.senate.gov/public/_cache/files/25bff0ec-481e-466a-843f-68ba5619e6d8/restoring-american-power-7.pdf.

¹⁵⁹ Donnelly, John . "Kaine, Other Senators Take Sides in Clash Over Nuclear Arms." Roll Call. July 26, 2016. <http://www.rollcall.com/news/policy/kaine-senators-take-sides-clash-nuclear-arms>.

opportunities for further arms control and avoid taking steps that create incentives for the expansion of existing nuclear weapons programs. To this end, we will work to reduce excessive spending on nuclear weapons-related programs that are projected to cost \$1 trillion over the next 30 years.”¹⁶⁰ The Trump administration may be able to leverage the fact that there are underlying disagreements within the Democratic party on nuclear modernization in to mobilize SASC ranking member, Jack Reed (Rhode Island), as well as, Mark Warner as two key Democrats who support efforts to update the nuclear triad.

Historical evidence points to past cycles of partisan politics playing a significant role in inefficiencies in modernizing the nuclear arsenal. The political structures of government today represent the dangers of delaying modernization as well as the risks associated with an administration not laying out clear budgetary requirements to each aspect of modernization. The Center for American Progress describes the typical process for modernization budget layouts. Initially, there is coordination between the President and the Pentagon; then, “officially the process ends here. The executive branch assumes that Congress will appropriate the funding necessary to allow the services to procure the requested inventory of systems.”¹⁶¹ However, there are problems with the simplicity of this model. In short, “this model does not allow the executive branch to account for political and fiscal pressures that may prevent the services from procuring the nuclear force that targeting analysis implied.”¹⁶²

The potential for the Trump Administration to link back specific pros of modernization from an international security, as well as, the budget cost to the Obama administration is a

¹⁶⁰ Donnelly, John . "Kaine, Other Senators Take Sides in Clash Over Nuclear Arms." Roll Call. July 26, 2016. <http://www.rollcall.com/news/policy/kaine-senators-take-sides-clash-nuclear-arms>.

¹⁶¹ Korb , Larence, and Adam Mount. "Setting Priorities for Nuclear Modernization ." Center for American Progress. February 2016. <https://cdn.americanprogress.org/wp-content/uploads/2016/02/03053017/NuclearArsenal2.pdf>.

¹⁶² Ibid

significant source of political capital that can be leveraged in gaining bipartisan support for controversial modernization programs. Furthermore, linking the goals of modernization to the perceptions of other political actors around the globe is critical in demonstrating to Democrats and Republicans the urgency of modernization overhaul goals. Ultimately, the goal of this policy is to reduce nuclear arsenal buildup while also isolating the ability of nuclear use across the limited handful of current nuclear states. Preserving bipartisan support in Congress is possible through a commitment to defining modernization as a means to prevent a future international crisis if states with nuclear arms find themselves in conflicts with American allied states. As Scher points out, “preserving this stability provides insurance against the fear and confusion that would accompany any serious military crisis under the nuclear shadow.”¹⁶³

The Trump Administration is now facing a variety of push-back with their hesitancy to take firm stances against Russia in matters of national security, Russian election interference, the Syrian conflict, as well as, a Luke-warm posture towards Vladimir Putin. Politically, one way to contribute towards softening those tensions among the American public, the media, and Democratic members of Congress is through a robust modernization program aimed at deterring Russia from engaging in escalated conflict in areas of strategic interest to the U.S. The July 8, 2016 bipartisan letter sent to Defense Secretary Ash Carter specifically calls for swift action regarding developing clear goals for modernization across the next five years. In their letter, 14 Democratic and Republican Senate members lay out a macro-scale policy objective by adopting a long term modernization plan. For instance, the letter outlines the three main rationales for updating all three legs of the nuclear triad. It states: “The Sea leg's unparalleled stealth introduces uncertainty into any adversary attempt to threaten the U.S. or its interests. The Air leg provides

¹⁶³ Statement of Robert Scher." House Armed Services Subcommittee on Strategic Forces. July 14, 2016. <http://docs.house.gov/meetings/AS/AS29/20160714/105199/HHRG-114-AS29-Wstate-ScherR-20160714.pdf>.

us with the flexibility to deploy deterrent assets, signaling intent and demonstrating resolve to both adversaries and allies alike.”¹⁶⁴ By referring to previous reasoning demonstrated in bipartisan circles, bipartisan support can prove to be advantageous for an administration currently operating under low-approval ratings.¹⁶⁵ The bi-partisan support presented in the July 2016 Senate letter to Carter has the ability to provide undecided Democratic leadership with the appropriate party cover (Tim Kaine) needed to support long range nuclear modernization proposals despite opposition coming from senior Democratic leadership, such as, Elizabeth Warren.¹⁶⁶

The Republican Party has long been an advocate of the U.S. spearheading international peace through a strong projection of force. The political advantage of a nuclear modernization is that a commitment to restoring aged portions of the Triad can assist in alleviating fears among Republican circles of a softening on American nuclear power. Part of the success during the previous administration’s push to ratify New START were members of the Obama Cabinet reassuring Republicans that arsenal downsizing would be accompanied by future commitments to nuclear modernization. In effect, the policy proposal prescribed in this analysis is aimed at catering to both sides of the political spectrum in pursuing a modernization/no first use policy that motivates the Russians to negotiate for future cuts. This type of policy is heavily favored by Democrats as set by the previous Obama administration precedent. However, modernization caters to Republicans whom were hesitant about a New START arms reduction treaty that may

¹⁶⁴ "United States Senate." July 08, 2016. <https://www.hoeven.senate.gov/imo/media/doc/070816Carter.pdf>.

¹⁶⁵ Yourish, Karen , and Paul Murray. "President Trump's Record Low Approval Rating Continues to Slide." *The New York Times* , April 03, 2017. https://www.nytimes.com/interactive/2017/02/28/us/politics/the-highs-and-lows-of-trumps-approval.html?_r=1.

¹⁶⁶ "Senators Markey and Feinstein to Obama on U.S. Nuclear Weapons Policy: Restrain and Reduce." Ed Markey United States Senator for Massachusetts. July 20, 2016. <https://www.markey.senate.gov/news/press-releases/senators-markey-and-feinstein-to-obama-on-us-nuclear-weapons-policy-restrain-and-reduce>.

or may not have been accompanied by US commitments to bolster all three legs of the nuclear triad.

Members of the defense community establishment, past congressional leaders, and key actors will undoubtedly play a pivotal role in the framing of a modernization/no first use policy. Similar to the approach of the Obama administration in rallying widespread bipartisan support for New START ratification from past government officials, the Trump Administration has the potential to rally support from previous defense, congressional and foreign policy elites as well. In a sense, modernization and no use can be used to frame a policy that sets the precedent for future arms reductions negotiations with Russia that has proven to already show such widespread approval. In his book, *Getting to 67: The Post-Cold War Politics of Arms Control Treaty Ratification*, Patrick Homan identifies areas where Obama was able to exploit widespread bipartisan support for his nuclear policy agenda. With respect to New START, “officials from the past seven administrations, Republican and Democrat alike, testified before Senate committees in support of the treaty. In fact, the number of Republicans who testified outnumbered Democrats. These endorsements included nearly every luminary within the American foreign policy establishments of both political parties, including all six living Secretaries of State from Republican administrations, from Henry Kissinger to Condoleezza Rice.”¹⁶⁷ A similar trend with regards to widespread support of modernization from key foreign policy and defense elites is evident today. Former Defense Secretary Bill Perry, Secretary of State Henry Kissinger and Sam Nunn, Chief Executive Officer of the Nuclear Threat Initiative are examples members of the defense community establishment that have advocated previously for modernization. The opinions and views of these previous administration officials holds

¹⁶⁷Homan , Patrick. *Getting to 67: The Post-Cold War Politics of Arms Control Treaty Ratification*. New York, NY, 10017.

significant weight in assessing the potential impact on this proposal as current members of congress often lean on previous generations of government leaders to formulate their voting decisions when it comes time to vote for defense appropriation bills.

In a 2010 statement of Dr. Kissinger before the Senate Foreign Relations Committee on the New Start Treaty, Kissinger expressed support for the US ability to engage in unilateral modernization while still remaining within the confines of future arms control agreements. Kissinger added that “as part of a number of recommendations, my colleagues, Bill Perry, George Shultz, Sam Nunn, and I have called for significant investments in a repaired and modernized nuclear weapons infrastructure and added resources for the three national laboratories. We expressed this view in a statement of January 20, 2010, as follows:

"Maintaining high confidence in our nuclear arsenal is critical as the number of these weapons goes down. It is also consistent with and necessary for U.S. leadership in nonproliferation, risk reduction, and arms reduction goals...Departures from our existing stewardship strategies should be taken when they are essential to maintain a safe, secure and effective deterrent." In determining what is essential, I believe that great weight should be given to the findings of the bipartisan Schlesinger-Perry Commission: "So long as modernization proceeds within the framework of existing U.S. policy, it should encounter minimum political difficulty."¹⁶⁸

Furthermore, the historical handling of modernization and the fiscal pressures that come along with delaying modernization are critical for the Trump administration. Ronald Reagan heavily criticized Jimmy Carter for failing to expedite plans to build the B-1 bomber. As a result, Reagan increased the defense budget by 28 % to construct both the B-1 and B-2 bombers. However, this did not come without backlash for the George H.W. Bush administration in his deterrence goals. “The rapid rise in defense spending helped to provoke the first sequester in 1985, which depressed the defense budget 10 percent in real terms during the second term of the

¹⁶⁸ "Statement of Dr. Henry A. Kissinger Before the Senate Foreign Relations Committee On the New Start Treaty." Henry Kissinger Recent Speeches and Public Statements. May 25, 2010. <http://www.henryakissinger.com/speeches/052510.html>.

Reagan administration. Tightened budgets and the end of the Cold War caused the George H.W. Bush administration to reduce the number of B-2s to 75 and, eventually, to 21.”¹⁶⁹

The role of interest groups as well as think tank’s in shaping public opinion and an administration’s vision for a policy are critical pieces of the political dynamic surrounding this policy proposal. The Heritage Foundation is a major conservative think tank, based in Washington, D.C. that has ambitious goals of leaving its mark on various domestic and foreign policy goals of the Trump administration. An issue the Trump administration will face is the already rocky relationship that exists between the traditionally conservative think tank and the Trump ideologies that have shown a tendency to deviate away from establishment conservative values. Healthcare reform has already proven to be a major test of the relationship between The Heritage Foundation and Trump. Reports have recently surfaced indicating that the Trump “Obamacare” repeal legislation “runs completely afoul of Heritage’s priorities and threatens to upend a critical relationship between conservative activists and the Trump administration.”¹⁷⁰ However, Heritage has a longstanding track record of staunch support for modernization. In a recent conversation with Michela Dodge, senior defense policy analyst at Heritage, she mentioned that her organization is recommending three distinct nuclear policies for the Trump administration. These include withdrawing from the Intermediate Nuclear Forces Treaty; withdrawing from New START; and congressional funding for long term nuclear modernization.¹⁷¹ It is widely noted that “The Heritage Foundation is closer to Trump world than any other administration since that of Ronald Reagan, a relationship cultivated as part of a

¹⁶⁹ Korb , Larence, and Adam Mount. "Setting Priorities for Nuclear Modernization ." Center for American Progress. February 2016. <https://cdn.americanprogress.org/wp-content/uploads/2016/02/03053017/NuclearArsenal2.pdf>.

¹⁷⁰ Cook , Nancy , and Andrew Restuccia. "Heritage Foundation's Cozy Relationship with Trump put to test." Politico . March 08, 2017. <http://www.politico.com/story/2017/03/trump-conservatives-heritage-foundation-235845>.

¹⁷¹ 2/28/2017 Michela Dodge Interview

strategy to give it deep influence. DeMint has strong ties to Vice President Mike Pence. The two have been friends since they served in the House together. Pence also spoke at a Heritage event late last year.”¹⁷² Due to the current strained relationship, the Trump administration currently has with Heritage over healthcare reform; there is uncertainty over whether there will be similar frictions over policies of strategic arms.

There are ways in which the Trump Administration may be able to garner public support for nuclear modernization by emphasizing using nuclear strength as a means to not strain conventional forces. In his book, *History as Policy*, Robert O’Neill touches on the hostilities American’s may have to leading conventional forces into troubled foreign zones. He notes that “At present, and in the near future, the US Government is going to require more military resources to commit in troubled areas with possibly fewer allies contributing effective forces. This crunch could well coincide with a period in which public opinion in the United States will be more critical of Presidential policies of foreign intervention.”¹⁷³ Scholars have noted that “recent qualitative studies on the relationship between public opinion and U.S. foreign policy put decisions into the following two categories: the President tends to lead or to follow public opinion; public opinion influences decision-making, constrains the decision or has no impact.”¹⁷⁴

Opposition

As previously indicated, evidence points to a strong list of key actors, groups and ex-

¹⁷² Cook , Nancy , and Andrew Restuccia. "Heritage Foundation's Cozy Relationship with Trump put to test." Politico . March 08, 2017. <http://www.politico.com/story/2017/03/trump-conservatives-heritage-foundation-235845>.

¹⁷³ O’Neill, Robert. "Restoring Utility to Armed Force in the 21st Century." In *History as Policy: Framing the Debate on the Future of Australia's Defense Policy*, edited by Huiskens Ron and Thatcher Meredith, 49-60. ANU Press, 2007. <http://www.jstor.org/stable/j.ctt24hbvw.9>.

¹⁷⁴ Dieck, Helene, Public Opinion and U.S. Military Interventions: The President's Room for Maneuver after the Cold War (2013). APSA 2013 Annual Meeting Paper; American Political Science Association 2013 Annual Meeting. Available at SSRN: <https://ssrn.com/abstract=2300105>

government officials who would support modernization. However, it is also worth noting the individuals, groups and possible members of the public that would be opposed to the policies laid out in this analysis. Foreign governments represent a section of international stakeholders that may share conflicting views on US decisions to expedite major nuclear modernization programs. Within the context of nuclear modernization and the ultimate goal of extended deterrence, the political ramifications, with respect to foreign governments and their response to US nuclear modernization, are critical to consider. Specifically, the Trump Administration must consider how the possible implementations of nuclear modernization policies affect the optics of the long-standing relationships of NATO allies to the United States. Particularly, the commitment the US projects of nonproliferation among the various NATO states. Russian hostilities towards US modernization have the potential to create diplomatic and political tensions among Russia and NATO allies. The scenario is as such: if the US moves forward towards a policy of nuclear modernization, what new tensions will that create for Russia to move nuclear weapons into Eastern European regions? Politically and diplomatically this has the potential to create a volatile environment with the US and the NATO states of which it is looking to supply extended deterrence. Recent reports have already indicated early signs of political and national security tensions. "The U.S. has recently deployed a missile defense system in Romania and is building a second base in Poland. U.S. and European officials say those sites are to defend against potential ballistic launches from Iran, but Zwack says that Russia views them as provocations. The new Polish missile defense site would be within range of the Iskander, adds Lewis."¹⁷⁵

Scholars have pointed out the growing fears regarding the erosion of the US nuclear

¹⁷⁵ Brumfiel, Geoff. "Russia Seen Moving New Missiles To Eastern Europe." NPR. Accessed December 8, 2016. <http://www.npr.org/sections/parallels/2016/12/08/504737811/russia-seen-moving-new-missiles-to-eastern-europe>.

umbrella in Europe. As Malcolm Chalmers and Simon Lunn of the Royal United Services Institute point out, “debates on nuclear weapon policy are, perhaps inevitably, strongly political and symbolic-theological even-in character.”¹⁷⁶ The political ramifications of US modernization and how that may affect the NATO response is worth considering as cold-war tensions appear to be a hallmark of the new post 9/11 Eastern Europe geopolitical environment. With recent Russian annexation of Crimea, the perception of what role NATO wishes for US nuclear weapons to be held in Eastern Europe could shift. As noted by Chalmers and Lunn, “with the end of the Cold War and collapse of the USSR, nuclear weapons have assumed a lower profile in NATO strategy. NATO has unilaterally reduced the number of American nuclear warheads and short range delivery systems in Europe.”¹⁷⁷ Furthermore, political complications may arise from this policy in that a US commitment to a nuclear no first use policy may complicate NATO leadership perceptions of the effectiveness of the US nuclear umbrella and to what extent the US would be willing to use any level of nuclear force no matter how aggressive Russian encroachments into various European regions become. A no first use policy mixed with a resurgence US modernization could create a volatile intentional political climate for the US and NATO member states. Russia is reportedly moving missile sites deeper into Eastern European regions creating fears among NATO member states of further military violence from Russia which may create a desire among NATO to rely on the US ability to engage in first-use nuclear strikes. From an effectiveness standpoint, the scenarios expressed above raise the question of if modernization can really deliver effective deterrence if Russia has already shown a willingness to engage militarily with Crimea without fear of an American first strike.

¹⁷⁶ Chalmers , Malcolm , and Simon Lunn. "Nato's Tactical Nuclear Dilemma ." Royal United Services Institute . March 2010. https://rusi.org/sites/default/files/201003_op_natos_tactical_nuclear_dilemma.pdf.

¹⁷⁷ Ibid

Scott Sagan of Stanford University alludes to these complex set of geo-political issues. He states that “The newer NATO member states and Turkey are particularly concerned about any change in NATO doctrine that they believe would signify a reduced commitment to joint defense on the part of the United States.”¹⁷⁸ There are international political dangers of the US choosing to continue on a path of ambiguity, particularly with delays in the modernization of forces and the subsequent deployment of those forces in Eastern Europe. Sagan notes that “Advocates of calculated ambiguity maintain that such threats usefully enhance deterrence because they raise the potential costs any government would face if it considered using chemical or biological weapons.”¹⁷⁹ Sagan forecasts the potential for a president to “feel increased pressure to use nuclear weapons to maintain his or her domestic reputation and America’s international reputation for honoring commitments.”¹⁸⁰

Apart from political actors in and outside of the U.S., advocacy organizations play a considerable role in shaping public opinion on nuclear modernization. The Union of Concerned Scientists (UCS) is a publically funded, non-profit group that focuses on pressing issues on defense, global climate change among many others. The UCS has played a pivotal role in voicing opposition to Obama Administration modernization goals as well as displaying opposition to already existing programs aimed at replacing current aging warheads. Additionally, UCS has previously raised concerns about the costs of Obama modernization proposals, the same proposals used to formulate this policy proposal. For instance, with respect to cost, “Based on the administration’s own cost estimates, we find there is no reason to believe that 3+2 would be less

¹⁷⁸ Sagan, Scott. "The Case for no First Use." Stanford University . https://fsi.stanford.edu/sites/default/files/51-3_12_Sagan_author_proof.pdf.

¹⁷⁹ Ibid

¹⁸⁰ The Commitment Trap: Why the United States Should Not Use Nuclear Threats to Deter Biological and Chemical Weapons Attacks’, *International Security*, vol. 24, no. 4, Spring 2000, pp. 85–115.

expensive than refurbishing existing weapons; indeed, it may actually be a more expensive approach.”¹⁸¹ Furthermore, UCS bases much of their modernization disapproval around the global political ramifications that could follow the development of new nuclear weapons and the subsequent testing that may be required" to validate their effectiveness. Ultimately, “if the United States did resume nuclear testing, it could encourage a resumption of testing by other nuclear-armed nations, ending an international moratorium that benefits U.S. security.”¹⁸² Subsequently, a system of trade-offs has to be considered as it relates to the global perception of other nuclear and non-nuclear states view of the CTBT (Comprehensive Test Ban Treaty) and the NPT (Non-Proliferation Treaty).¹⁸³

Recommendation

Given the following analysis outlined in this document, I recommend for the Trump Administration to pursue a policy of nuclear modernization, modernizing all three legs of the nuclear triad over a thirty year period. The first major consideration to make is that from a cost standpoint, the cost of modernizing the U.S. nuclear arsenal is much less than the cost of engaging in a prolonged armed conflict with another regional actor. A large proportion of negative rhetoric focuses on the percentage of the defense budget absorbed by future modernization costs. Air Force General John Hyten, Commander of the United States Strategic Command recently stated that “Deterrence will always be cheaper than war, and there is nothing

¹⁸¹ Gronlound, Lisbeth . "Bad Math on New Nuclear Weapons ." Union of Concerned Scientists . October 2015. <http://www.ucsusa.org/sites/default/files/attach/2015/11/Bad-Math-Nuclear-Weapons-3-Plus-2.pdf>.

¹⁸² Ibid

¹⁸³ Ibid

more expensive than losing a war.”¹⁸⁴ While ideological in its tone, this statement reflects the challenges the U.S. has recently encountered when engaging in long standing regional conflicts. Claims of a trillion dollar budgetary requirement necessary to fund a thirty year project are arguably far-fetched and an exaggeration of the true costs of multi-layered modernization. Before leaving office, Ash Carter stated that “Over the next two decades, I expect the total cost of nuclear modernization to be approximately \$270 billion. Although this presents a long-term affordability challenge for DoD, I believe we must fund the enterprise to ensure that our nuclear deterrent continues to provide the President options and remains as safe, secure, and reliable as it is today.”¹⁸⁵ Preserving a strong nuclear deterrent is more paramount than ever. The constant advantage the U.S. has had through the Post WWII and Cold-War period was the advantage in overwhelming nuclear force. Trends are indicating that regimes are pushing further away from traditional modes of war and engaging more often in irregular conflict. Irregular conflict has been a major component of the Iraq and Afghanistan conflicts. According to recent CBO report, the Iraq and Afghanistan wars by the end of 2017 will have cost U.S. taxpayers upwards of 2.4 \$ trillion dollars.¹⁸⁶ Given the current tensions escalating around the globe ranging from Eastern Europe to North Korea, the idea of immersing already exhausted American troops in a further protracted armed conflict would be reckless and irresponsible.

Nuclear modernization at its core represents a fiscally responsible and feasible alternative to the norms of the previous two administrations that have continued to commit troops to Middle

¹⁸⁴ Garamone, Jim. "Stratcom Commander Makes Case for Modernizing Nuclear Triad." U.S. Department of Defense. March 31, 2017. <https://www.defense.gov/News/Article/Article/1137610/stratcom-commander-makes-case-for-modernizing-nuclear-triad/>.

¹⁸⁵ Reif, Kingston. "U.S. Nuclear Modernization Programs." Arms Control Association. February 2017. <https://www.armscontrol.org/factsheets/USNuclearModernization>.

¹⁸⁶ "U.S. CBO estimates \$2.4 trillion long-term war costs." Reuters. October 24, 2007. <http://www.reuters.com/article/us-iraq-usa-funding-idUSN2450753720071024>.

East conflict without proving clear goals for full scale troop withdrawal. Conversely, Hyten has reiterated that “We have to increase [spending] somewhere between 2.5 and 3 percent,” he said. “That leaves 94 percent of our defense budget to do the things we have to. When you think of the survival of our nation -- and I think that is the most important reason we have a military ... the backstop of all of that is the nuclear enterprise.”¹⁸⁷ Furthermore, former Defense Secretary Ash Carter holds significant credibility when providing his forecasting of modernization costs. As noted by the National Institute of Public Policy, currently “nuclear weapons and their supporting systems cost about \$16 billion per year, or only three percent of the annual defense budget.”¹⁸⁸ Advocates of total nuclear disarmament fail to point out the historically low levels of defense budget funds being used to currently fund the nuclear triad. Furthermore, “spending only three percent on the nuclear arsenal is historically below average, and modernization plans would just bring expenses to their historical norm.”¹⁸⁹ Additionally, the harsh reality is that pursuing a policy of exclusively cutting nuclear arms without modernizing could create costs that impossible to anticipate from a geo-political standpoint as well. If the U.S. fails to modernize, how will our close NATO allies as well as Japan and South Korea react to reoccurring aggression from China, Russia and North Korea? “Cutting the U.S. nuclear arsenal further would likely embolden Russia and China, damage relations with allies, and drive allies to examine obtaining nuclear weapons themselves. These are costly possibilities indeed.”¹⁹⁰

Upgrades to the current nuclear arsenal are also cost effective in their ability to retain

¹⁸⁷ Garamone, Jim. "Stratcom Commander Makes Case for Modernizing Nuclear Triad." U.S. Department of Defense. March 31, 2017. <https://www.defense.gov/News/Article/Article/1137610/stratcom-commander-makes-case-for-modernizing-nuclear-triad/>.

¹⁸⁸ Costlow, Matthew. "The costs of nuclear disarmament." National Institute of Public Policy. March 26, 2015. <http://www.nipp.org/wp-content/uploads/2015/03/Costlow-The-Costs-of-Nuclear-Disarmament.pdf>.

¹⁸⁹ Ibid

¹⁹⁰ Ibid

effectiveness for decades to come of which will provide the U.S. flexible strategic options in the face of potential future military conflicts. Operational effectiveness is one of best features of this modernization plan. While impossible to say for certain what the international political climate will look like thirty years from now, the Arms Control Association can confirm that modernization of the current set of Minuteman III ICBM's would be operationally effective through the 2080's.¹⁹¹ Today's congressional landscape is marked by restricted budgets and finite resources. There is no opportunity more prudent than today to afford the U.S. the ultimate flexibility in handling future conflicts.

Further evidence is pointing that the generally positive and optimistic climate that followed the Cold-War has long diminished .“Both Russia and China see great value in nuclear weapons to support expansionist foreign policies and they show zero interest in reductions.”¹⁹² Evidence of this trend is becoming increasingly clear. “Russia’s doctrine today is not a replay of “stable mutual deterrence or NATO flexible response doctrine. No, it includes nuclear coercion based on selective nuclear first use threats in non-nuclear contingencies.”¹⁹³ If the U.S. is to expect a continuation of the worldwide non-proliferation regime, modernization must occur to alleviate the threats that Russia continues to perpetuate by virtue of their own commitment to modernize.¹⁹⁴ Furthermore, given today’s heightened tensions with Russia it is uncertain if Russia will ever be willing to return to the negotiating table for future arms cuts. Former Principal Under Secretary of Defense for Policy James Miller has been firm in his support for

¹⁹¹ Reif, Kingston. "U.S. Nuclear Modernization Programs." Arms Control Association. February 2017. <https://www.armscontrol.org/factsheets/USNuclearModernization>.

¹⁹² Payne, Keith. "Nuclear Modernization in Today's Environment?" National Institute of Public Policy. Accessed July 29, 2015. <http://www.nipp.org/wp-content/uploads/2015/08/Payne-STRAT-Symposium-2015-remarks.pdf>.

¹⁹³ Ibid

¹⁹⁴ Kristensen, Hans, and Robert Norris. "Russian Nuclear Forces." Bulletin of the Atomic Scientists. April 15, 2016. <http://www.tandfonline.com/doi/pdf/10.1080/00963402.2016.1170359>.

upgrading the triad. He noted that “because the United States will retain a diverse triad of strategic forces, any Russian cheating under New START would have little effect on the assured second strike capabilities of U.S. strategic forces.”¹⁹⁵ Moreover, there are direct qualitative advantages that each leg of the triad holds in its future modernization. Baker Spring and Michela Dodge summarize the advantages of modernizing each leg of the triad from a military strategic standpoint. In their analysis they note that “ICBMs are the cheapest, most reliable leg of the U.S. triad and can respond faster to a threat than any other leg of the triad. Heavy bombers allow policymakers to display policy intent and can be dispersed among bases to increase survivability, and they provide a wider range of yield options. Submarines can be deployed to demonstrate intent, and are the most survivable leg of the nuclear triad.”¹⁹⁶ The survivability of current nuclear forces is in serious jeopardy as former Defense Secretary referred to the current state of U.S. nuclear forces as “bleak”.¹⁹⁷ This analysis strongly agrees with Gates’ assessment that the U.S. “must take steps to transform from an aging Cold War nuclear weapons complex that is too large and too expensive to a smaller, less costly, but modern enterprise that can meet our nation’s nuclear security needs for the future.”¹⁹⁸ A commitment to modernization ensures that the survivability and flexibility of U.S. nuclear forces are never called into question. As of now, the U.S. has not engaged in any nuclear testing since 1992. The current components of the nuclear triad were arguably not built to last past their upcoming extended lifetimes. As Gates points out, “At a certain point, it will become impossible to keep extending the life of our arsenal, especially in light of our testing moratorium. It also makes it harder to reduce existing stockpiles, because

¹⁹⁵ Dodge, Michela, and Baker Spring. "Time to Modernize and Revitalize the Nuclear Triad." The Heritage Foundation. January 27, 2012. <http://www.heritage.org/defense/report/time-modernize-and-revitalize-the-nuclear-triad>.

¹⁹⁶ Ibid

¹⁹⁷ "Gates: Nuclear Weapons and Deterrence in the 21st Century." Carnegie Endowment for International Peace. October 28, 2008. http://carnegieendowment.org/files/1028_transcrip_gates_checked.pdf.

¹⁹⁸ Ibid

eventually we won't have as much confidence in the efficacy of the weapons we do have."¹⁹⁹

Finally, as discussed earlier, the ability for modernization to supply extended deterrence throughout the Middle East, Pacific region and Eastern Europe is a core element of this policy proposal. Bluntly, if Russia ever decided to use nuclear force against a rival state, American extended deterrence has deeply failed. As Evan Montgomery of CSBA notes, "Russia's piecemeal efforts to restore its lost continental empire, China's military expansion in its near seas and beyond, and Iran's willingness to both create and fill power vacuums throughout its neighborhood all suggest that "geopolitical rivalries have stormed back to center stage."²⁰⁰ A comprehensive modernization plan reduces the probability of allied states engaging in their own modernization goals. While the potential for future arms reductions with Russia is bleak given the current geo-political landscape the US cannot afford to wait on the hopes of Russia pursuing less aggressive future nuclear policies.

¹⁹⁹ Ibid

²⁰⁰ Montgomery, Evan. "Extended Deterrence in the Second Nuclear Age." Center for Strategic and Budgetary Assessments. 2016. http://csbaonline.org/uploads/documents/CSBA6183-ExtendedDeterrence_PRINT.pdf.

Curriculum Vitae

Peter Hawkins was born in Ft. Irwin, California and raised in Bethesda, MD. He earned his Bachelors of Arts in Foreign Affairs from Bridgewater College and is a candidate for his Masters of Arts in Public Management at The Johns Hopkins University. Peter's first post in the U.S. Federal Government was as a front office Special Assistant at the Social Security Administration Office of the Inspector General. He now works at the Department of Health and Human Services-Food and Drug Administration on legislative and regulatory issues.